

St. Paul Park Refining Co. LLC 301 St. Paul Park Road St. Paul Park, MN 55071 651-459-9771

CERTIFIED MAIL: 7015 1520 0000 2883 0112

April 28, 2019

Air Quality Tracking Coordinator Compliance Determination Unit Air Quality Division Minnesota Pollution Control Agency 520 Lafayette Road North St. Paul, Minnesota 55155-4194

RE: First Quarter 2019 Excess Emission and CEM Report

St. Paul Park Refining Co. LLC AQD Facility ID No: 16300003 AQD File No: 0203 (AI ID 447)

Dear Sir/Madam:

St. Paul Park Refining Co. LLC hereby provides the Minnesota Pollution Control Agency (MPCA) with the enclosed Excess Emission and Continuous Emissions Monitor (CEM) Downtime Report for 1st quarter 2019.

On October 1, 2018, Andeavor completed a merger transaction with Marathon Petroleum Corporation. As such, Andeavor is now a subsidiary of Marathon Petroleum Corporation. All of Andeavor's subsidiaries continue as subsidiaries of Andeavor and thus also subsidiaries of Marathon Petroleum Corporation. In addition, as part of the merger transaction Andeavor is now known as Andeavor LLC. These merger-related transactions involve only Andeavor LLC, and there have been no changes to the Andeavor subsidiaries or to the Andeavor Logistics, LP subsidiaries (including Western Refining Logistics, LP) or its operations. St. Paul Park Refining Co. LLC remains the owner and operator of the refinery. Western Refining Logistics, LP is and will remain the owner and operator of pipeline, gathering, terminalling transportation and storage assets, and thus we are providing this notice as a courtesy.

Please contact me at (651) 769-6766 if you have any questions or if you need additional information.

Respectfully.

Scott Conant

Advanced HES Professional St. Paul Park Refining Co. LLC

Enclosures

ce: Patrick Foley (EPA) w/report – CERTIFIED MAIL: 7015 1520 0000 2883 0129 USEPA c/o Matrix w/report – CERTIFIED MAIL: 7015 1520 0000 2883 0099 Ms. Jennifer Carlson (MPCA) w/report – CERTIFIED MAIL: 7015 1520 0000 2883 0082 Ms. Cheryl Newton (EPA) w/report – CERTIFIED MAIL: 7015 1520 0000 2883 0105

Email: AQRoutineReport.PCA(a)state.nm.us

jennifer,m.carlson@state.mn.us marc.severin@state.mn.us

First Quarter 2019 Excess Emission and CEM Report

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AIR ENFORCEMENT BRANCH U.S. EPA REGION 5

St. Paul Park Refining Co. LLC

Section	Description O.S. E.
1	Report Certification
2	Report Summary
	Percent Excess Emission and CEM Downtime Summary
	Excess Emissions Summary
	Incident A – Flare H ₂ S Exceedance due to Frozen Pressure Transmitter
	Incident B - Flare H2S Exceedance due to Freeze up Issues
	Incident C - Flare H ₂ S Exceedance due to Tailgas Compressor Trip
	Incident D – FCC flue gas CO > 500 ppm/1-hr A
	SBC/BWON Vent Gas System
	SARA Reportable Releases
	Monitor Bypasses Summary
	SRU Bypasses Summary
	Continuous Emissions Downtime Summary

3	Excess Emi	ssions and CEM Reporting Forms	Page
	COMG7	Refinery Fuel Gas System	3-1
	EQUI1	Heater 28-B-1	3-5
	EQUI2	FCC Regenerator (Opacity)	3-9
	EQUI2	FCC Regenerator (CO)	3-13
	EQUI2	FCC Regenerator (NO _x ppm)	3-16
	EQUI2	FCC Regenerator (SO ₂ ppm)	3-20
	EQUI2	FCC Regenerator (SO ₂ lb/hr)	3-24
	EQUI2	FCC Regenerator (SO _x)	3-27
	EQUI3	Heater 5-B-1	3-30
	EQUI4	Heater 2-B-3 (NO _x)	3-34
	EQUI4	Heater 2-B-3 (SO ₂)	3-38
	EQUI5	Heater 1-B-5	3-43
	EQUI6	Heater 1-B-7	3-47
	EQUI7	Heater 29-B-1/2	3-51
	EQUI8	Heater 3-B-1/2/3	3-55
	EQUI9	Heater 3-B-4	3-59
	EQUI10	Heater 3-B-7	3-63
	EQUI11	Heater 3-B-8	3-67

Table of Contents

EQUI12	Heater 34-B-1	3-71
EQUI13	Heater 34-B-2	3-75
EQUI14	Heater 32-B-1 (NO _x)	3-79
EQUI14	Heater 32-B-1	3-82
EQUI15	Heater 10-B-1	3-86
EQUI16	#2 SRU/SCOT (SO ₂ ppm)	3-90
EQUI16	#2 SRU/SCOT (SO ₂ lb/hr)	3-94
EQUI17	Heater 36-B-1	3-98
EQUI18	Heater 36-B-2/3/4	3-102
EQUI19	Heater 36-B-6E	3-106
EQUI20	Heater 36-B-6W	3-110
EQUI21	Heater 37-B-1	3-114
EQUI326	Heater 37-B-2	3-118
EQUI23	Heater 38-B-1/2	3-122
EQUI28	Light Oil Loadrack (Vapor Recovery Unit)	3-127
EQUI41	Light Oil Loadrack (Permanent Vapor Combustor Unit)	3-130
TREA13	Refinery Flare Stack (Main Flare) (SO ₂)	3-133
EQUI328	WWTP Thermal Oxidizer (SBC Vent Gas H ₂ S/TO Temp.)	3-139
EQUI328	WWTP Thermal Oxidizer (N ₂ Header/TO Temp.)	3-144
EQUI33	#3 Sulfur Recovery Unit (SO ₂ ppm)	3-147
EQUI33	#3 Sulfur Recovery Unit (SO ₂ lb/hr)	3-151
EQUI38	Vacuum Enhanced Product Recovery (VEPR) Phase 1	3-155
EQUI39	Vacuum Enhanced Product Recovery (VEPR) Phase 2	3-158
EQUI42	Boiler No. 7 (NO _x lb/mmbtu)	3-161
EQUI42	Boiler No. 7 (SO ₂)	3-164
EQUI43	Boiler No. 8 (NO _x lb/mmbtu)	3-167
EQUI43	Boiler No. 8 (SO ₂)	3-170
EQUI44	Heater 8-B-1 (NOx ppm)	3-173
EQUI44	Heater 8-B-1 (NOx ppm)	3-176
COMG27	Boilers No. 7 and No. 8 (CO, TPY)	3-179
COMG27	Boilers No. 7 and No. 8 (NOx, TPY)	3-183
TREA13	Refinery Flare Stack (Main Flare) (H ₂ S)	3-187
TREA13	Refinery Flare Stack (Temporary Flare) (SO ₂)	3-190
TREA13	Refinery Flare Stack (Temporary Flare) (H ₂ S)	3-196

Appendix A Quarterly CGA Results

Cylinder Gas Audits/Internal Calibration Error Tests Conducted. All CGAs passed

January 17, 2019	EQUI16	$#2 SRU (O_2)/(SO_2)$
January 28, 2019	EQUI4	#2 Crude 2-B-3 (O ₂)/ (NO _X)
January 28, 2019	EQUI14	HDH 32-B-1 (NO _X)/ (O ₂)
March 21, 2019	EQUI2	FCC Opacity

Relative Accuracy Test Audits (RATA).

February 18, 2019	EQUI42	Boiler #7 (O2)/ (NOx)/ (CO)
February 19, 2019	EQUI43	Boiler #8 (O2)/ (NOx)/ (CO)
March 5, 2019	EQUI2	FCC Regenerator
		(O2/CO2/NOx/CO/SO2
March 6, 2019	EQUI33	#3 SRU (O2)/ (SO2)
March 7, 2019	EQUI44	Heater 8-B-1(NOx)/ (O2)
March 19, 2019	EQUI28	VRU (TOC as Propane)
March 19, 2019	TREA13	#1 Flare (SO2)
March 19, 2019	COMG7	Fuel Gas Balance Drum (H2S)
March 20, 2019	TREA13	#1 Flare (H2S)
March 20, 2019	EQUI328	WWTP Thermal Oxidizer (H2S)

Section 1 Report Certification

Certification for 1st Quarter 2019 CEM Excess Emission and CEM Downtime Report

This section of the report serves as the St. Paul Park Refining Co. LLC and Western Refining Terminals LLC's written certification of the information contained within this report. This certification is comprehensive of the entire report and replaces the need for certification of each of the Excess Emissions and CEM Reporting Forms.

St. Paul Park Refining Co. LLC & Western Refining Terminal LLC

Based on the information and belief formed after reasonable inquiry, the statements and information in this report are true, accurate, and complete.

Tommy Chavez, Vice-President & Refinery Manager

4-29-2019 Date

Section 2 Report Summary

Excess Emissions Summary First Quarter 2019

Excess Emissions Summary

Incident A - Flare H₂S Exceedance due to Frozen Pressure Transmitter

Starting on January 24, 2019, ambient temperature were drop below zero. At approximately 3:25pm on 01/26/2019 the impulse line to a pressure transmitter in unit 29 had frozen causing the transmitter to read low compared to actual pressure. This caused a control valve in unit 29 to slowly close in response to the false low pressure reading. Pressure began to rise in the stripper tower until the pressure safety valve in the 29 unit began to open and relieve to the flare at approximately 4:00pm. H₂S concentration rose in the flare and the flare H₂S scavenger injection rate was increased to 100% but the limit had already been exceeded. A field operator identified the source and took corrective action. The pressure safety valve quit relieving and operators began to thaw the pressure transmitter in unit 29 and insulation was installed.

The flare H2S 162 ppm/3-hr limit was exceeded for 5 hours. There was no exceedance of the applicable flare vent gas work practice standard or 500 lbs SO2/24-hr reportable quantity.

Periods Over 162 ppm H ₂ S, 3-hour Avg.	Date and Time	Measured 3- Hour Avg. (ppm H ₂ S)
1	1/26/19 16:00	609
2	1/26/19 17:00	900
3	1/26/19 18:00	1167
4	1/26/19 19:00	635
5	1/26/19 20:00	339

Incident B – Flare H₂S Exceedance due to Freeze up Issues

At approximately 6:20 on 01/29/2019 operations started trouble-shooting elevated H_2S to the flare. The source of the H_2S was not found via the Refinery Flare Troubleshooting Procedure. At 6:44pm the flare H_2S scavenger injection rate was increased to 100%. At 9:20pm an operator found that the scavenger pumps were frozen and weren't pumping. An operator began attempts to thaw the pumps. At 11:49pm, the flare H_2S 162 ppm H_2S 3-hour rolling average limit was exceeded.

At around 2:00am on 01/30/2019, pressure transmitter in unit 29 began to read low again due to possible freeze up. A control valve in unit 29 began to slowly close again and at 2:30am the pressure relief device in unit 29 relieved to the flare. At 2:45am, an operator heard the pressure safety valve in unit 29 relieving and took corrective action. The pressure safety valve quit relieving. The operator began attempting to thaw the pressure transmitter in unit 29 and restored indication at approximately 9:00am. Operations did not expect the transmitter to freeze again due to preventive measures already taken to insulate the line. The line will be heat traced under the insulation to prevent freezing in the future.

Additionally, to prevent freezing in the future, a work flow process will be developed to ensure work requests are being entered throughout the year for winterization prior to a cold snap.

The flare H₂S 162 ppm/3-hr limit was exceeded for 23 hours. There was no exceedance of the applicable flare vent gas work practice standard or 500 lbs SO₂/24-hr reportable quantity.

Periods Over 162 ppm H ₂ S, 3-hour Avg.	Date and Time	Measured 3- Hour Avg. (ppm H ₂ S)
1	1/29/19 23:00	170
2	1/29/19 00:00	227
3	1/29/19 01:00	234
4	1/29/19 02:00	517
5	1/29/19 03:00	1065
6	1/29/19 04:00	1054
7	1/29/19 05:00	726
8	1/30/19 09:00	246
9	1/30/19 10:00	399
10	1/30/19 11:00	504
11	1/30/19 12:00	582
12	1/30/19 13:00	595
13	1/30/19 14:00	605
14	1/30/19 15:00	547
15	1/30/19 16:00	476
16	1/30/19 17:00	389
17	1/30/19 18:00	298
18	1/30/19 19:00	212

Incident C - Flare H₂S Exceedance due to Tailgas Compressor Trip

On 2/3/19, at approximately 06:04 AM, the Crude Tail Gas (TG) compressor tripped on suction drum 2-F-10 high level. The crude TG compressor trip resulted in an exceedance of the flare 162ppm H₂S 3-hr rolling average and the 500 lbs SO₂/day RQ. Upon investigation, it was identified that contaminated solvent was introduced to the front end of the SDA unit, which resulted in unstable levels that caused carry over of asphaltenes from the asphaltene flash drum into the solvent surge drum. The carryover of asphaltene caused high pressure, which was vented to the solvent surge drum to the crude TG compressor. The high pressure in the solvent surge drum was caused by an accumulation of liquid solvent rather than non-condensable gases. Liquid solvent was vented to the crude TG compressor suction drum thus causing the high-level trip.

Field Operations responded to the crude TG Compressor suction drum high level trip. Operations removed liquid level from suction drum, cleaned the crude TG Compressor, and changed filters. The SDA Unit was shut down until the source of problem could be identified and corrected. The crude TG Compressor restarted to normal operations.

The SDA procedure will be updated to include a step for SDA solvent quality control verification prior to filling the solvent surge drum.

The flare H_2S 162 ppm/3-hr limit was exceeded for 6 hours. The 500 lbs $SO_2/24$ -hr reportable quantity was exceeded. A total of 820 lbs/24-hr of SO_2 was released.

Periods Over 162 ppm H ₂ S, 3-hour Avg.	Date and Time	Measured 3- Hour Avg. (ppm H ₂ S)
1	2/3/19 06:00	439
2	2/3/19 07:00	1253
3	2/3/19 08:00	2044
4	2/3/19 09:00	2037
5	2/3/19 10:00	1266
6	2/3/19 11:00	471

Incident D - FCC flue gas CO > 500 ppm/1-hr A

On February 26, 2019, while cutting rate due to a high level in the FCC main column, the unit experienced a one-hour CO exceedance 576 ppm, with the limit being 500 ppm.

While increasing rate on the FCC, the main column overhead accumulator level increased past the level of the level indication. When this happened, operations cut the FCC rate. During the rate reduction, the O2 levels increased causing operations to decrease Air/O2 flows to the regenerator. The air flow reduction was greater than was needed to correct the upset condition. A rate cut reduction corrective action table will be provided to avoid CO excursions.

Since measured CO data points are not verifiable or accurate when 50% greater than the high calibration gas concentration, a value of 1327.35 ppm (1.5 times the daily span calibration gas concentration of 884.9 ppm CO) was substituted for all greater data points. The recalculated and verifiable value is provided in the last column of the table. SPPRC believes these periods to be exempt under SSM provisions NSPS J of the regulations and is providing the data for informational purposes only.

For compliance with MACT CC FCC 500 ppm/1-hr avg. CO limit, since these exceedances occurred during hot-standby/start-up of the FCC and oxygen was maintained for 43 of 44 hours, only one exceedance of the limit occurred.

Periods Over 500 ppm CO @ 0% O ₂ 1- hour Avg.	Date and End Time	Measured 1-Hour Avg. (ppm CO)	Verified 1-hour Avg. (ppm CO)	% O2
1	2/26/19, 16:00	576	341	>1%

SARA Reportable Release Summary

A total of 820 lbs/24-hr of SO2 was released during the Flare H2S Exceedance due to crude Tailgas Compressor Trip on 2/26/2019. See Incident C summary for additional details.

SBC/BWON Vent Gas System

During the 1st quarter 2019, BWON vent gasses were bypassed around the WWTP TO and associated temperature monitor 20.4% percent of the time or 439.2 hours.

The primary reason the Thermal Oxidizer has been tripped is to avoid a safety concern due to O2 being present in the vent gas line. Backwashing of the filters was recently routed to the DGF Overflow Pit and API Pump Pit due to plugging Dual Media Filters caused by recycling solids. Air/O2 from the filter backwash sequence disengages in the DGF Overflow Pit and API Pump Pit resulting in vent gases that contain O2 enroute to an ignition source (Thermal Oxidizer). Sweep

gases are manually being tripped to the atmosphere during a backwash to prevent the possibility of an explosion. The recycling solids issue is not an ongoing problem but can occur. Both short term and long-term options are being evaluated to re-route backwash water or addition of a vessel to reduce O2 in the backwash water.

Monitor Bypass Summary

There were no monitor bypasses during the 1st quarter 2019.

SRU Bypass Summary

There were no SRU bypasses during the 1^{st} quarter 2019 that resulted in an exceedance of an SO_2 emission limit.

Section 3 Excess Emissions and CEM Reporting Forms

Appendix A Quarterly CGA Results

1st Quarter 2019 - Percent Excess Emissions and CEM Downtime Summary			
Source Description	Excess Emission Percent Time Exceeded This Quarter (1)	Continuous Monitor Downtime Percent This Quarter (2,3)	
Refinery Fuel Gas Drum (H2S ppmv, 3-hr rolling ave)	0.00%	0.28%	
Refinery Fuel Gas Drum (H2S ppmv, 365-day rolling ave)	0.00%	0.28%	
Heater 28-B-1 (lb SO2/mmbtu, 3 hr average)	0.00%		
Heater 28-B-1 (lb SO2/hr, 3 hr average)	0.00%		
Heater 28-B-1 fuel gas flow meter	~	0.00%	
FCC Opacity (30%, 6-min_average)	0.00%	0.51%	
FCC Opacity (20%, 3-hr average)	0.00%	0.51%	
FCC CO (ppm)	0.05%	0.14%	
FCC NOx (ppm - 365 day rolling average)	0.00%	0.14%	
FCC NOx (ppm - 7 day rolling average)	0.00%	0.14%	
FCC SO2 (ppm - 7 day rolling average)	0.00%	0.14%	
FCC SO2 (ppm - 365 day rolling average)	0.00%	0.14%	
FCC SO2 (lb/hr)	0.00%	0.14%	
FCC SOx (lb/1000 lb coke burn)	0.00%	0.14%	
Heater 5-B-1 (lbs SO2/hr, 3-hr rolling ave)	0.00%		
Heater 5-B-1 (lbs SO2/mmbtu, 3-hr rolling ave)	0.00%		
Heater 5-B-1 fuel gas flow meter Heater 2-B-3 (lbs SO2/hr, 3-hr rolling ave)		0.19%	
	0.00%	0.00%	
Heater 2-B-3 (lbs SO2/mmbtu, 3-hr rolling ave)	0.00%		
Heater 2-B-3 (lbs NOx/mmbtu, 3-hr rolling ave) Heater 2-B-3 (lbs NOx/mmbtu, 12-Month rolling ave)	0.00%	0.05%	
Heater 2-B-3 NSP fuel gas flow meter	0.00%	0.00%	
Heater 2-B-3 Fuel Gas flow meter		0.00%	
Heater 2-B-3 NOX/O2 CEM		0.05%	
Heater 1-B-5 (lbs SO2/hr, 3-hr rolling ave)	0.00%		
Heater 1-B-5 (lbs SO2/mmbtu, 3-hr rolling ave)	0.00%		
Heater 1-B-5 fuel gas flow meter		0.05%	
Heater 1-B-7 (lbs SO2/hr, 3-hr rolling ave)	0.00%		
Heater 1-B-7 (lbs SO2/mmbtu, 3-hr rolling ave)	0.00%		
Heater 1-B-7 fuel gas flow meter		0.00%	
Heater 29-B-1/29-B-2 (lbs SO2/hr, 3-hr rolling ave)	0.00%		
Heater 29-B-1/29-B-2 (lbs SO2/mmbtu, 3-hr rolling ave)	0.00%		
Heater 29-B-1/29-B-2 fuel gas flow meter		0.09%	
Heater 3-B-1/2/3 (lbs SO2/hr, 3-hr rolling ave)	0.00%		
Heater 3-B-1/2/3 (lbs SO2/mmbtu, 3-hr rolling ave)	0.00%		
Heater 3-B-1/2/3 fuel gas flow meter		0.00%	
Heater 3-B-4 (lbs SO2/hr, 3-hr rolling ave)	0.00%		
Heater 3-B-4 (lbs SO2/mmbtu, 3-hr rolling ave)	0.00%		
Heater 3-B-4 fuel gas flow meter		0.00%	
Heater 3-B-7 (lbs SO2/hr, 3-hr rolling ave)	0.00%		
Heater 3-B-7 (1bs SO2/mmbtu, 3-hr rolling ave)	0.00%		
Heater 3-B-7 fuel gas flow meter		0.00%	
Heater 3-B-8 (lbs SO2/hr, 3-hr rolling ave)	0.00%		
Heater 3-B-8 (lbs SO2/mmbtu, 3-hr rolling ave) Heater 3-B-8 fuel gas flow meter	0.00%		
		0.00%	
Heater 34-B-1 (lbs SO2/hr, 3-hr rolling ave)	0.00%		
Heater 34-B-1 (lbs SO2/mmbtu, 3-hr rolling ave) Heater 34-B-1 fuel gas flow meter	0.00%	0.05%	
Heater 34-B-2 (lbs SO2/hr, 3-hr rolling ave)	0.00%	0.05%	
Heater 34-B-2 (lbs SO2/mm, 3-mr rolling ave) Heater 34-B-2 (lbs SO2/mmbtu, 3-hr rolling ave)	0.00%		
Heater 34-B-2 fuel gas flow meter		0.09%	
Heater 34-B-2 fuel gas flow meter		0.00%	
Heater 32-B-1 (lbs SO2/hr, 3-hr rolling ave)	0.00%		
Heater 32-B-1 (lbs SO2/mmbtu, 3-hr rolling ave)	0.00%		
Heater 32-B-1 fuel gas flow meter		0.05%	
	0.00%	0.05%	
Heater 32-B-1 (NOx lb/mmbtu, 365 day rolling ave)	0.000		
Heater 32-B-1 (NOx lb/mmbtu, 365 day rolling ave) Heater 10-B-1 (lbs SO2/hr, 3-hr rolling ave)	0.00%		

1st Quarter 2019 - Percent Excess Emissions and CEM	I Downtime Summar	
Source Description	Excess Emission Percent Time Exceeded This Quarter (1)	Continuous Monitor Downtime Percent This Quarter (2,3)
#2 SRU/SCOT SO2/O2 (ppmv, 12-hr ave)	0.00%	1.34%
#2 SRU/SCOT SO2/O2 (lbs/hr, 1-hr ave)	0.00%	1.34%
#2 SRU/SCOT SO2/O2 (lbs/hr, 3-hr rolling ave)	0.00%	1.34%
#2 SRU/SCOT bypasses	0.00%	
Heater 36-B-1 (lbs SO2/hr, 3-hr rolling ave) Heater 36-B-1 (lbs SO2/mmbtu, 3-hr rolling ave)	0.00%	
Heater 36-B-1 (IDS 502/mmbtu, 3-hr folling ave) Heater 36-B-1 fuel gas flow meter	0.00%	0.00%
Heater 36-B-2, 3, and 4 (lbs SO2/hr, 3-hr rolling ave)	0.00%	
Heater 36-B-2, 3, and 4 (lbs SO2/mmbtu, 3-hr rolling ave)	0.00%	
Heater 36-B-2, 3, and 4 fuel gas flow meter		0.00%
Heater 36-B-6E (lbs SO2/hr, 3-hr rolling ave)	0.00%	
Heater 36-B-6E (lbs SO2/mmbtu, 3-hr rolling ave)	0.00%	
Heater 36-B-6E fuel gas flow meter		0.05%
Heater 36-B-6W (lbs SO2/hr, 3-hr rolling ave)	0.00%	
Heater 36-B-6W (lbs SO2/mmbtu, 3-hr rolling ave)	0.00%	
Heater 36-B-6W fuel gas flow meter		0.10%
Heater 37-B-1 (lbs SO2/hr, 3-hr rolling ave)	0.00%	
Heater 37-B-1 (lbs SO2/mmbtu, 3-hr rolling ave)	0.00%	0.05%
Heater 37-B-1 fuel gas flow meter Heater 37-B-2 (lbs SO2/hr, 3-hr rolling ave)	0.00%	0.05%
Heater 37-B-2 (lbs SO2/mm, 3-hr rolling ave) Heater 37-B-2 (lbs SO2/mmbtu, 3-hr rolling ave)	0.00%	
Heater 37-B-2 fuel gas flow meter	0.00%	0.00%
Heaters 38-B-1, 38-B-2 (lb SO2/hr, 3-hr rolling ave)	0.00%	
Heaters 38-B-1, 38-B-2 (lb SO2/mmbtu, 3-hr rolling ave)	0.00%	
Heaters 38-B-1, 38-B-2 NSP Gas flow meter		0.00%
Heaters 38-B-1, 38-B-2 PSA fuel gas flow meter		0.00%
Light oil loadrack VRU (TOC ppmv, 6-hr average)	0.00%	0.42%
Light oil loadrack- Permanent VCU (Limit = Temp ≥215 deg F, 3-hr rolling ave)	0.00%	0.00%
Refinery flare (presence of pilots)		0.00%
Refinery flare - SARA Reportable emissions - SO2	1.06%	1.39%
Refinery flare - SARA Reportable emissions - NOx	0.00%	
Refinery flare - H2S (3-hour rolling average)	1.34%	2.13%
Temporary flare (presence of pilots) Temporary flare - SARA Reportable emissions - SO2	0.00%	0.00% 0.00%
Temporary flare - SARA Reportable emissions - NOx	0.00%	0.00%
Temporary flare - H2S (3-hour rolling average)	0.00%	0.00%
W.W.T.P. SBC Offgas (H2S ppmv, 365-day rolling ave)	0.00%	0.35%
W.W.T.P. Thermal Oxidizer, SBC Offgas (Temp Deg. F, 3-hr rolling ave)	0.00%	0.00%
W.W.T.P. Thermal Oxidizer, NESHAP Offgas (Temp Deg. F, 3-hr rolling ave)	0.00%	0.00%
#3 SRU/SCOT SO2/O2 (ppmv, 12-hr ave)	0.00%	0.00%
#3 SRU/SCOT SO2/O2 (lbs/hr, 1-hr ave)	0.00%	0.00%
#3 SRU/SCOT SO2/O2 (lbs/hr, 3-hr rolling ave)	0.00%	0.00%
#3 SRU/SCOT Bypasses	0.00%	
NP VEPR Phase 1 - Catalytic AB w/Heat Exchg (Temp, 3-hr rolling ave)	0.00%	0.00%
NP VEPR Phase 2 - Catalytic AB w/Heat Exchg (Temp, 3-hr rolling ave) Boiler 7 NOx (lb/MMBtu, 30 day rolling ave)	0.00%	0.00%
Boiler 7 SO2 (lb/MMBtu, 3-hr rolling ave)	0.00%	0.00%
Boiler 7 fuel gas flow meter	0.00%	0.00%
Boiler 8 NOx (lb/MMBtu, 30 day rolling ave)	0.00%	0.00%
Boiler 8 SO2 (lb/MMBtu, 3-hr rolling ave)	0.00%	
Boiler 8 fuel gas flow meter		0.00%
Heater 8-B-1 (lb SO2/mmbtu, 3-hr average)	0.00%	
Heater 8-B-1 (lb SO2/hr, 3-hr average)	0.00%	*
Heater 8-B-1 (ppmvd, 30-day average)	0.00%	0.42%
Heater 8-B-1 fuel gas flow meter	0.00%	0.00%
GP 032 CO (TPY, Combined 12-month Rolling Sum) Boiler 7 CO (TPY, Combined 12-month Rolling Sum w/ Boiler 8)	0.00%	0 002
Boiler 7 CO (IPY, Combined 12-month Rolling Sum w/ Boiler 8) Boiler 8 CO (TPY, Combined 12-month Rolling Sum w/ Boiler 7)		0.00% 0.00%
GP 032 NOx (TPY, Combined 12-month Rolling Sum)	0.00%	0.00%
Boiler 7 NOx (TPY, Combined 12-month Rolling Sum w/ Boiler 8)		0.00%
Boiler 8 NOx (TPY, Combined 12-month Rolling Sum w/ Boiler 7)		0.00%
Notes:		
(1) 0.00% indicates No Excess Emissions.		
(2) Monitor Downtime includes daily calibration checks for opacity.		
(2) Homitor Downer me includes during carried to checks for opacity.		

MINNESOTA POLLUTION CONTROL AGENCY

AQD FILE #: #0203 (AI ID 447)

EXCESS EMISSION AND CEM REPORTING FORM

POLLUTANT	(circle one):	SO2	NOx	со	CO2	02	TRS	H2S	HCL	Opacity
REPORTING	QUARTER:	Other:			-	MONITOR MODEL:	Vista 2	2020 GC		·
						MFR:	Combust	tion Engine	ering	
FACILITY: s	St. Paul Park Refi	ning Co. LLC		· · · · · · · · · · · · · · · · · · ·	-					
_					-	EMISSION	LIMITS AN	ID AVERAGIN	IG TIME:	
EMISSION SI	JBJECT ITEM:	COMG7	<u> </u>		-		_			ng average ling average
							оо ррш	125 303	day 101	ring uverage
EMISSION U	NIT(S):	Refinery fuel ga	s system		-	EMISSION	BASIS:	40 CFR 60		
								NSPS Subp	arc Ja	
ASSOCIATED	-	EQUI1, EQUI3, EQ								
-	EQUI9, EQUI10, EQU					I17, EQUI1		OUT 43 and	POUTAA	
_1	EQUI19, EQUI20, EQ	UIZI, EQUIZE, ,	EQUI326, E	QUIZ3, EQU	124,	EQUI33, E	QUI42, E	QUI43, and	I EQUI44.	·
NOTE: <u>I</u>	H2S limits within	40 CFR 60 Subp.	Ja only ap	ply to EQU	142,	EQUI43, a	ind EQUI4	4.		
						OF EMISSI		HOURS	2160	0
					· · · · ·		,			-
A. EMISSION	DATA SUMMARY					B. CEM PE	RFORMAN	ICE SUMMAF	₹Y	
1 [DURATION OF EXCESS	EMISSIONS (HRS)	3-hour	365-day			1 DURATIO	ON OF CEM	OOWNTIM	E DURING
á	a) Startup/Shutdown		0.00	0.00		SOURCE OPERATION (HRS)				
l.) Control equipment		0.00	0.00			•	or malfunction		0.00
-	c) Process problems		0.00	0.00	_		,	nonitor malfun	ction	0.00
	I) Other known causes		0.00	0.00			c) QA ca			0.00
	e) Unknown causes		0.00	0.00	_	1		known causes	5	6.00
) Soot blowing		0.00	0.00		1	e) Unkno	wn causes		0.00
ç	j) Fuel problems		0.00	0.00						
	TOTAL DURATION (HR	S)	0.00	0.00	-	2 TOTAL DUR			RS)	6.00
3 F	PERCENT OF TOTAL					;	3 PERCEN	IT OF TOTAL		
E	EXCESS EMISSIONS		0.00%	0.00%	-		CEM DO	WNTIME		0.28%
		FOR OPACITY, RECO	ORD ALL TIME	S IN MINUTE	ES. F	OR GASES, I	RECORD A	ALL TIMES IN	HOURS.	
% Total Exces	ss Emissions =		Total Duration	n of Excess E	missio	ons / (Total O	perating Ti	me - CEM Do	wntime)	
% Total CEM	Downtime =		CEM Downtin	ne / Total Ope	erating	Time			,	
NOTES:					·					
_										
_	· ,,,									
	nces: I certify that the re orting period. I certify th									ere were no exceedances
SUBMITTED		See certificatio		·			it of my kild	J	ATE:	3 Yanu,
								- "		

REPORTING QUARTER:		First, 2019	AQD FILE #: #0203 (AI ID 447)
EMISSION UNIT(S):		Refinery fuel gas s	<u>ystem</u>
POLLUTANT MONITORED:		H2S	
·	TOTAL DURATION	MAX. CONC.	
DATE/TIME	(HRS)	(ppm, 3-hr average)	CAUSE/CORRECTIVE ACTION
a) Startup/Shutdown 1/1/2019 4/1/2019		No excess emissions.	
Total	0.00		
b) Control equipment 1/1/2019 4/1/2019 Total	0.00	_No excess emissions.	
c) Process problems 1/1/2019 4/1/2019 Total	0.00	No excess emissions.	
d) Other known causes 1/1/2019 4/1/2019 Total	0.00	_ No excess emissions.	
e) Unknown causes 1/1/2019 4/1/2019 Total	0.00	_No excess emissions.	
f) Soot blowing 1/1/2019 4/1/2019 Total	0.00	No excess emissions.	
g) Fuel problems 1/1/2019 4/1/2019 Total	0.00	_No excess emissions.	

REPORTING QUARTER:		First, 2019	AQD FILE #: #0203 (AI ID 447)
EMISSION UNIT(S):		Refinery fuel gas sy	vstem
POLLUTANT MONITORED:		H2S	
	TOTAL DURATION	MAX. CONC.	
DATE/TIME	(HRS)		CAUSE/CORRECTIVE ACTION
a) Startup/Shutdown 1/1/2019 4/1/2019		No excess emissions.	
Total	0.00		
b) Control equipment 1/1/2019 4/1/2019 Total	0.00	_No excess emissions.	
c) Process problems 1/1/2019 4/1/2019 Total	0.00	No excess emissions.	
d) Other known causes 1/1/2019 4/1/2019 Total	0.00	_No excess emissions.	
e) Unknown causes 1/1/2019 4/1/2019 ₋ Total	0.00	_No excess emissions.	
f) Soot blowing 1/1/2019 4/1/2019 Total	0.00	_No excess emissions.	
g) Fuel problems 1/1/2019 4/1/2019 Total	0.00	_No excess emissions.	

CONTINUOUS EMISSION MONITOR DOWNTIME REPORT

REPORTING QUARTER:		First, 2019	AQD FILE #: #0203 (AI ID 447)
EMISSION UNIT(S):		Refinery fuel gas system	
POLLUTANT MONITORED:		H2S	
DATE/TIME	TOTAL DURATION (HRS)	CAUSE/CORRECTIVE ACTION	
DATE HINE	(******)		· · · · · · · · · · · · · · · · · · ·
a) Monitor malfunction			
Total	0.00	-	
b) Non-monitor malfunction			
2) (10) (10)			
Total	0.00	_	
iotai	0.00		
c) QA calibration			
1/1/2019 0:00			
4/1/2019 0:00 Total	0.00	_	
d) Other known causes			
2/19/2019 9:00 2/19/2019 10:00	1.00	Alarm of validations Stides souland value norte	alaawad
3/7/2019 14:00	1.00	Alarm of validation; Slider replaced, valve ports	ciearieu
3/7/2019 14:00	1.00	Loss of signal due to controls work	
3/22/2019 16:00	1.00	Loss of signal due to controls work	
3/22/2019 20:00	4.00	Communications error	
Total	6.00		
e) Unknown causes			
÷*		_	
Total	0.00		

MINNESOTA POLLUTION CONTROL AGENCY

AQD FILE #: #0203 (AI ID 447)

EXCESS EMISSION AND CEM REPORTING FORM

POLLUTANT (circle one):	SO2 NOX	СО	CO2	O2 TRS	H2S HCL	Opacity
	Other: Flow		-	MONITOR		
REPORTING QUARTER:	First, 2019		_	MODEL: Fuel Gas	Flow Rate/FG H	2S CEM
				MFR:		
FACILITY:						
St. Paul Park	Refining Co. LLC		-			
			-	ENNOCION LINES AND	\	
EMICCIÓN CUD IECT ITEN	Α.			EMISSION LIMIT AND	DAVERAGE HME: D2/hr - 3 hour	
EMISSION SUBJECT ITEN	Λ;					our rolling avg.
12011			-	1.73 10 0	327 mm32cu - 3 11	our rolling avg.
EMISSION UNIT(S):	Alkylation					
(.,	Heater 28-B-1		_	EMISSION BASIS:	SIP for	SO2 NAAQS
			-		<u></u>	
ASSOCIATED ITEMS:	COMG7, EQUI163, EQU	1173, STRU47	7, COMG20			
NOTE: Thomas was now	- fuel oil runtimo durin	a the miart	or			
NOTE. Inere was zero	o fuel oil runtime durin	g the quarte	er.			
						
				OPERATING HOURS	OF EMISSION UN	(iT:
					2160	
A PRIOCION DATA CUMA	AADV			D. CEM D. d.		
A. EMISSION DATA SUM	XCESS EMISSIONS (HRS)			B. CEM Performance		ME DUDING
1	ACESS EIVISSIONS (FIRS)	lb/hr	lb/mmbtu		OF CEM DOWNTII	VIE DURING
a) Startup/Shutdov	A/D	0.00	0.00	SOURCE OF	PERATION (HRS)	Fuel Gas
b) Control equipme		0.00	0.00	a) Monitor m	alfunction	0.00
c) Process probler		0.00	0.00	1	tor malfunction	0.00
d) Other known ca		0.00	0.00	c) QA calibra		0.00
e) Unknown cause		0.00	0.00	d) Other know		0.00
f) Soot blowing		0.00	0.00	e) Unknown		0.00
g) Fuel problems		0.00	0.00		cauoco	
2 TOTAL DURATIO	N (HRS)	0.00	0.00	2 TOTAL DUR	ATION (HRS)	0.00
3 PERCENT OF TO	,		0.00	3 PERCENT C	, ,	
EXCESS EMISSION		0.00%		CEM DOWN		0.00%
	FOR OPACITY, RECORD	ALL TIMES IN	MINUTES. F	OR GASES, RECORD	ALL TIMES IN HO	URS.
	· · · · · · · · · · · · · · · · · · ·					
% Total Excess Emissions	= Total Dura	tion of Excess E	missions / (T	otal Operating Time - C	EM Downtime)	
% Total CEM Downtime =	CEM Dowr	ntime / Total Op	erating Time			
	<i>52.</i> 11.55.11.	т тока. ор	ordang ranc			
NOTES:						
~~= ~ · · · · · · · · · · · · · · · · · 						
						
	that the required analyses were					
exceedances during the rep	orting period. I certify that I am f	amiliar with the	information in	this report and that to	the best of my know	vledge the information is valid.
SUBMITTED BY:	See certification pa	age at front	of report		DATE:	

EXCESS EMISSION REPORT

REPORTING QUARTER:		First, 2019		AQD FILE #: #0203 (AI ID 447)
EMISSION UNIT(S):		EQUI1		_
POLLUTANT MONITORED:		SO2 lb/hr		
DATE/TIME	TOTAL DURATION (HRS)	MAX. EMISSIONS RATE	CAUSE/CORRECTIVE ACTION	1
a) Startup/Shutdown 1/1/2019 4/1/2019 _ Total	0.00	No excess emissions.		
b) Control equipment 1/1/2019 4/1/2019	0.00	No excess emissions.		
Total	0.00	140 excess cimissions.		
c) Process problems 1/1/2019 4/1/2019 Total	0.00	No excess emissions.		
d) Other known causes 1/1/2019 4/1/2019 _ Total	0.00	No excess emissions.		
e) Unknown causes 1/1/2019 4/1/2019 Total	0.00	No excess emissions.		
f) Soot blowing 1/1/2019 4/1/2019 _ Total	0.00	No excess emissions.		
g) Fuel problems 1/1/2019 4/1/2019 _ Total	0.00	No excess emissions.		

EXCESS EMISSION REPORT

REPORTING QUARTER:		First, 2019	AQD FILE # #0203 (AT ID 447)
EMISSION UNIT(S):		EQUI1	_
POLLUTANT MONITORED:		SO2 lb/mmbtu	
DATE/TIME	TOTAL DURATION (HRS)	MAX. EMISSIONS RATE CAUSE/CORRECTIVE ACTION	N
a) Startup/Shutdown 1/1/2019 4/1/2019		_No excess emissions.	
Total	0.00		
b) Control equipment 1/1/2019 4/1/2019 _ Total	0.00	_No excess emissions.	
c) Process problems 1/1/2019 4/1/2019 _ Total	0.00	_No excess emissions.	
d) Other known causes 1/1/2019 4/1/2019 _ Total	0.00	No excess emissions.	
e) Unknown causes 1/1/2019 4/1/2019 _ Total	0.00	No excess emissions.	
f) Soot blowing 1/1/2019 4/1/2019 _ Total	0.00	No excess emissions.	
g) Fuel problems 1/1/2019 4/1/2019 Total	0.00	No excess emissions.	

CONTINUOUS EMISSION MONITOR DOWNTIME REPORT

REPORTING QUARTER:		First, 2019	AQD FILE #: #0203 (AT ID 447)
EMISSION UNIT(S):		Heater 28-B-1 (EQUI1)	
POLLUTANT MONITORED:		Fuel Gas Flow Rate	
DATE/TIME	TOTAL DURATION (HRS)	CAUSE/CORRECTIVE ACTION	
a) Monitor malfunction			
		_	
Total	0.00		
b) Non-monitor malfunction			
Total	0.00	-	
c) QA calibration			
Total	0.00	_	
d) Other known causes			
Total	0.00	_	
e) Unknown causes			
Total	0.00	_	

MINNESOTA POLLUTION CONTROL AGENCY

AQD FILE #: #0203 (AI ID 447)

EXCESS EMISSION AND CEM REPORTING FORM

POLLUTANT (circle one):	SO2	SOX	NOx	co	CO2	02	TRS	H2S	HCL	(Opacity)
	Other:	Metal HAP	per MACT Subpart UUU							$\overline{}$
					MONITOR					
REPORTING QUARTER:	First, 2019				MODEL:	440				
					MFR:	Thermo	Electron	Corporat	ion	_
FACILITY:										
St. Paul Park Refini	ing Co. LLC									
ELUCATION OF BUILDING					EMISSIO			GING TIME:		
EMISSION SUBJECT ITEM:	EQUI2							cept for		_
								n any one	hour (1)	_
EMISSION UNIT(S):	FCC regenerator				EMISSION	-	city/3-h	r Avg.		
EMISSION ONLY	FCC regenerator				EMISSIO		7011 14	05, subp.	1 74	,
							63.1564	05, <u>supp</u> .	T/ Trem I	
ASSOCIATED ITEMS:	EQUI164, TREA17					40 CIK	03.1304			
PROCESS UNIT DESCRIPTION	N:	EQUI2 is a	approximately a 30,50	0 bpd fluidized cata	lytic crac	king un	it.			
			als from the FCC are							
					TOTAL O	PERATING	HOURS			
					OF EMISS	TINU NOIS	1	2160		
A FINANCIAN BATA OURINAB	<u> </u>				1= ====					
A. EMISSION DATA SUMMARY	<u>r</u>				B. CEM P	ERFORM	ANCE SUM	MARY		
1 DURATION OF EXCESS E	MISSIONS (6-MIN 30% Limit)	1 00	RATION OF EXCESS EMISS	SIONS (3-HR 20% Limit)	1	DURATIO	N OF CEM	DOWNTIME	DURING	
a) Startup/Shutdown	0.00		Startup/Shutdown	0.00			OPERATIO		DONING	
b) Control equipment	0.00	- 1 '	Control equipment	0.00	-		r malfunction		0.00	
c) Process problems	0.00	⊣	Process problems	0.00	_	,	onitor malfu		0.00	-
d) Other known causes	0.00	⊣ ′	Other known causes	0.00		c) QA cal			660.00	-
e) Unknown causes	0.00	e) t	Jnknown causes	0.00		d) Other I	nown cause	es .	0.00	-
f) Soot blowing	0.00	n s	oot blowing	0.00		e) Unkno	wn causes		0.00	_
g) Fuel problems	0.00	g) I	uel problems	0.00				,		_
2 TOTAL DURATION (MIN)	0.00	2 TO	TAL DURATION (HR)	0.00	2	TOTAL D	URATION (I	MIN)	660.00	_
3 PERCENT OF TOTAL		3 PE	RCENT OF TOTAL		3	PERCEN	T OF TOTA	L.		
EXCESS EMISSIONS	0.00%	EX	CESS EMISSIONS	0.00%		CEM DO	NNTIME		0.51%	_
	FOR OPACITY, RECORD A	LL TIMES IN MI	NUTES. FOR GASES, REC	ORD ALL TIMES IN HOURS	 3.					
% Total Excess Emissions =		Tatal Duration	n of Excess Emissions / (Tota	ol Constitut Time CEM De						
			•	as Operating Time - CENI DO	willine)					
% Total CEM Downtime =		CEM Downtin	ne / Total Operating Time							
NO (1) According to MN						ever				
	contains two or more 6									
	ove noted regulation,		ore 6-minute average	is exceeded in any c	ne hour, i	tis				
reported in the summ	ary at the front of th	is report.								
If no exceedances: I certify that	the required analyses were ma	de, that I am fa	miliar with the results, and th	at to the best of my knowled	ge there were	no excee	dances duris	ng the report	ing period. I	certify that
I am familiar with the information				,	-			· · · · · · · · · · · · · · · · · · ·	S F	,
SUBMITTED BY:	See certification page	ge at front	of report					DATE:		

REPORTING QUARTER:		First, 2019		AQD FILE # #0203 (AI ID 447)
EMISSION UNIT(S):		FCC regenerator		
POLLUTANT MONITORED:		Opacity (20% 3-hr Limit)		
DATE/TIME	TOTAL DURATION (HR)	MAX. OPACITY (%)	CAUSE/CORRECTIVE ACTION	
a) Startup/Shutdown				
1/1/2019 4/1/2019				
4/1/2019				
total	0	No excess emissions.		
b) Control equipment				
1/1/2019				
4/1/2019				
total	0	No excess emissions.		
c) Process problems				
1/1/2019				
4/1/2019				
total	0	No excess emissions.		
d) Other known causes				
1/1/19 0:00				
4/1/19 0:00		No excess emissions		
total	0			
e) Unknown causes 1/1/2019				
4/1/2019				
total	0	No excess emissions.		
f) Soot blowing				
1/1/2019				
4/1/2019				
total	0	No excess emissions.		
g) Fuel problems				
1/1/2019				
4/1/2019				
total	0	No excess emissions.		

REPORTING QUARTE	ER:		First,	2019		AQDFILE#: #0203 (AI ID 447)
EMISSION UNIT(S):			FCC re	generator		
POLLUTANT MONITO	RED:		Opacit	у		
DATE/TIME		TOTAL DURATION (MIN)		MAX. OPACITY (%)	CAUSE/CORRECTIVE ACTION	
a) Startup/Shutdown	1/1/2019		# of 6 min	Max Opacity (%)		
	4/1/2019					
	total	0	0	No excess emissions.		
b) Control equipment	1/1/2019 4/1/2019 _					
	total	0	0	No excess emissions.		
c) Process problems	1/1/2019 4/1/2019					
	total	0	0	No excess emissions.		
d) Other known cause:						
	1/1/19 0:00 4/1/19 0:00	0	0.0	No excess emissions.		
	total	0				
e) Unknown causes	1/1/2019 4/1/2019					
	total	0	0	No excess emissions.		
f) Soot blowing	1/1/2019 4/1/2019					
	total	0	0	No excess emissions.		
g) Fuel problems	1/1/2019					
	4/1/2019_			_		
	total	0	0	No excess emissions.		

CONTINUOUS EMISSION MONITOR DOWNTIME REPORT

REPORTING QUARTER:		First, 2019	AQD FILE #: #0203 (AI ID 447)
EMISSION UNIT(S):		FCC regenerator	· · · · · · · · · · · · · · · · · · ·
POLLUTANT MONITORED:		Opacity	
DATE/TIME	TOTAL DURATION (MIN)	CAUSE/CORRECTIVE ACTION	
a) Monitor malfunction 1/1/2019 0:00 4/1/2019 0:00 Total	0.00	-	
b) Non-monitor malfunction 1/1/2019 4/1/2019 Total	0.00	-	
c) QA calibration	2.22		
1/1/19 0:00 4/1/19 0:00 3/21/19 13:12	546	Daily calibrations	
3/21/19 14:00 3/21/2019 14:00	48	Quarterly audit, troubleshoot erratic readings	
3/21/2019 15:06 Total	66 660,00	_Complete quarterly audit	
d) Other known causes 1/1/2019 0:00 4/1/2019 0:00			
Total ⁻	0.00	-	
e) Unknown causes 1/1/2019 0:00 4/1/2019 0:00			
Total	0.00	-	

MINNESOTA POLLUTION CONTROL AGENCY

AQD FILE #: #0203 (AI ID 447)

EXCESS EMISSION AND CEM REPORTING FORM

POLLUTANT (circle one):	SO2	sox	NOX C	co	CO2	02	TRS	H2S	HCL	Opacity
	Other:	Organic H	AP per MAC'I	' Subpa	art UUU					
					MONITOR					
REPORTING QUARTER:	First, 20	19			MODEL:	Advance	Optima (U	ras 14) Gas	Analyzer	
FACILITY:					MFR:	ABB				
St. Paul Park Refining	Co. LLC									
					EMISSION L	IMIT AND A	VERAGE TI	ΛE:		
EMISSION SUBJECT ITEM:	EQUI2					500 ppmv	vd - 1 hou	r average		
EMICOLON LINUT(C)	FCC regen	erator			EMICCIONI	MCIC.				
EMISSION UNIT(S):	rec regen	eracor			EMISSION E				02 (-)	
								40 CFR 60.1	03(a)	
ASSOCIATED ITEMS:	POLITICA I	TD E 3 1 7					53.1565(a)		Table 6 Onti	
ASSOCIATED ITEMS.	EQUI164,	IREAL/				40 CFR 6	53, MACT S	ubpart 000,	Table 8, Opti	on 2
PROCESS UNIT DESCRIPTION:		EQUI2 is a	a fluidized	cata	lytic crac	king unit				
		The mater:	als from t	he FC	are rout	ed to the	FCC colur	nn for fract	tionation.	
					TOTAL OPE	RATING HO	DURS			
					OF EMISSIC	N UNIT:	_	2160	-	
A. EMISSION DATA SUMMARY					B. CEM PER	FORMANC	E SUMMARY	,		
1 DURATION OF EXCESS EMIS	SSIONS (HRS)					DURATIO	N OF CEM D	OWNTIME DU	IRING	
a) Startup/Shutdown			0.00			SOURCE	OPERATION	(HRS)		
b) Control equipment			0.00				malfunction		0.00	
c) Process problems			1.00			b) Non-mo	onitor malfund	tion	0.00	
d) Other known causes			0.00			c) QA calil	bration		0.00	
e) Unknown causes			0.00			d) Other k	nown causes		3.00	
f) Soot blowing			0.00			e) Unknow			0.00	
g) Fuel problems			0.00			,				
2 TOTAL DURATION (HRS)			1.00			TOTAL DI	JRATION (HI	38)	3.00	
3 PERCENT OF TOTAL							OF TOTAL	,		
EXCESS EMISSIONS			0.05%		,	CEM DOV			0.14%	
	FOR OPACI	TY, RECORD A	ALL TIMES IN	MINUT	ES. FOR GA	SES, RECC	ORD ALL TIM	ES IN HOURS		
% Total Excess Emissions =		Total Duratio	n of Excess E	mission	s / (Total Ope	erating Time	- CEM Dowr	ntime)		
% Total CEM Downtime =		CEM Downtii	ne / Total Ope	erating 1	Γime					
NOTES: Actual monitored values are no	ted in this secti	on.								
During excess emission events			high calibrat	ion gas	concentratio	n is used to	replace any a	analyzer readin	igs over that value	since
measured data points are not v										
for greater detail.										
-										
If no exceedances: I certify that the re	equired analyse I certify that I ar									ances during the reporting
SUBMITTED BY:	•	fication pag					•	DATE:		

REPORTING QUARTER:		First, 2019	AQD FILE #: #0203 (AI ID 447)
EMISSION UNIT(S):		FCC regenerator	
POLLUTANT MONITORED:		CO and O2	
DATE/TIME	TOTAI DURATI (HRS)	ON CONCENTRATION (ppm), hourly average	CAUSE/CORRECTIVE ACTION
	0.00 0.00 0.00	Actual Recalc	
4	/1/2019 /1/2019		
Total	0.00	No excess emissions.	
c) Process problems 2/26/20 2/26/20 Total	19 1500 19 1600 1,00	576 343	Please see Incident summary C for details.
	/1/2019 /1/2019 0.00	No excess emissions.	
	/1/2019 /1/2019		
Total	0.00	No excess emissions.	
	/1/2019 /1/2019 0.00	No excess emissions.	
4	/1/2019 /1/2019		
Total	0.00	No excess emissions.	

CONTINUOUS EMISSION MONITOR DOWNTIME REPORT

REPORTING QUART	ER:		First, 2019	AQD FILE #: #0203 (AI ID 447)	
EMISSION UNIT(S):			FCC regenerator		
POLLUTANT MONITO	ORED:		CO and O2		
DATE/TIME		TOTAL DURATION (HRS)	CAUSE/CORRECTIVE ACTION		
a) Monitor malfunction	n				
	Total	0.00	-		
b) Non-monitor malful	nction				
	Total	0.00	_		
c) QA calibration					
	Total	0.00	-		
d) Other known cause					
	3/27/2019 14:00 3/27/2019 16:00 3/27/2019 17:00	2.00	Preventative maintenance		
	3/27/2019 18:00 Total	1.00 3.00	Sample shut off due to pump issue; tubing fixed		
e) Unknown causes					
	Total	0.00	-		

MINNESOTA POLLUTION CONTROL AGENCY

AQD FILE #: #0203 (AI ID 447) EXCESS EMISSION AND CEM REPORTING FORM POLLUTANT (circle one): SO2 SOX NOx CO 02 H2S HCL Opacity Other: MONITOR REPORTING QUARTER: MODEL: Advance Optima (Uras_UV) Gas Analyzer First, 2019 **FACILITY** St. Paul Park Refining Co. LLC EMISSION LIMIT AND AVERAGE TIME: EMISSION SUBJECT ITEM: 90 ppmvd, 02 free - 7 day rolling average EQUI2 70 ppmvd, O2 free - 365 day rolling average EMISSION UNIT(S): FCC regenerator EMISSION BASIS: Consent Decree Effective 4/3/06 ASSOCIATED ITEMS: EQUI164, TREA17 PROCESS UNIT DESCRIPTION: EQUI2 is a fluidized catalytic cracking unit. The materials from the FCC are routed to the FCC column for fractionation TOTAL OPERATING HOURS OF EMISSION UNIT: 2160 A. EMISSION DATA SUMMARY B. CEM PERFORMANCE SUMMARY 1 DURATION OF EXCESS EMISSIONS (HRS) 7 Day 365 Day 1 DURATION OF CEM DOWNTIME DURING SOURCE OPERATION (HRS) a) Startup/Shutdown 0.00 0.00 b) Control equipment a) Monitor malfunction 0.00 0.00 0.00 c) Process problems b) Non-monitor malfunction 0.00 0.00 0.00 d) Other known causes c) QA calibration 0.00 0.00 0.00 e) Unknown causes 0.00 0.00 d) Other known causes 3.00 f) Soot blowing e) Unknown causes 0.00 0.00 g) Fuel problems 0.00 0.00 2 TOTAL DURATION (HRS) 0.00 2 TOTAL DURATION (HRS) 0.00 3.00 3 PERCENT OF TOTAL 3 PERCENT OF TOTAL EXCESS EMISSIONS CEM DOWNTIME 0.00% 0.00% 0.14% FOR OPACITY, RECORD ALL TIMES IN MINUTES. FOR GASES, RECORD ALL TIMES IN HOURS. % Total Excess Emissions = Total Duration of Excess Emissions / (Total Operating Time - CEM Downtime) % Total CEM Downtime = CEM Downtime / Total Operating Time NOTE: CEM downtime is the same downtime reported on the form for EQUI2 for CO ppm If no exceedances: I certify that the required analyses were made, that I am familiar with the results, and that to the best of my knowledge there were no exceedances during the reporting period. I certify that I am familiar with the information in this report and that to the best of my knowledge the information is valid. SUBMITTED BY: See certification page at front of report DATE:

REPORTING QUARTER:	First, 2019		AQD FILE #: #0203 (AI ID 447)
EMISSION UNIT(S):	FCC regenerator		
POLLUTANT MONITORED:	NOx and 02		
TOTAL	MAX.		
DURATION	CONCENTRATION		
DATE/TIME (HRS)	(ppm), 7-day rolling avg	CAUSE/CORRECTIVE ACTION	
a) Startup/Shutdown			
a) Startup/Shutdown			
1/1/2019	No		
4/1/2019 Total 0.00	No excess emissions.		
1 otal 0.00			
b) Control equipment			
1/1/2019			
4/1/2019	No excess emissions.		
Total 0.00	_,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
c) Process problems			
1/1/2019			
4/1/2019	No excess emissions.		
Total 0.00			
d) Other known causes			
1/1/2019	No commo austrations		
4/1/2019 Total 0.00	_ No excess emissions.		
rotar 0.00			
e) Unknown causes			
1/1/2019			
4/1/2019	No excess emissions.		
Total 0.00	_		
f) Soot blowing			
1/1/2019			
4/1/2019	No excess emissions.		
Total 0.00			
g) Fuel problems			
g) Fuel problems 1/1/2019			
4/1/2019	No excess emissions.		
Total 0.00			

REPORTING QUARTER:		First, 2019		AQD FILE #: #0203 (AI ID 447)	
EMISSION UNIT(S):		FCC regenerator		·· ······	
POLLUTANT MONITORED:		NOx and O2			
	TOTAL	MAX.			
	DURATION	CONCENTRATION			
DATE/TIME	(HRS)	(ppm), 365-day rolling avg	CAUSE/CORRECTIVE ACTION		
a) Startup/Shutdown					
 a) Startup/Shutdown 					
1/1/2019					
4/1/2019_		No excess emissions.			
Total	0.00				
b) Control equipment					
1/1/2019					
4/1/2019		No excess emissions.			
Total	0.00	_			
-) P					
c) Process problems 1/1/2019					
4/1/2019		No excess emissions.			
Total	0.00	_ NO excess emissions.			
rotai	0.00				
d) Other known causes					
1/1/2019					
4/1/2019		No excess emissions.			
Total	0.00	-			
e) Unknown causes					
1/1/2019					
4/1/2019		No excess emissions.			
Total	0.00	_140 excess cimissions.			
f) Soot blowing					
1/1/2019					
4/1/2019_	2.00	No excess emissions.			
Total	0.00				
g) Fuel problems					
1/1/2019					
4/1/2019		No excess emissions.			
Total	0.00	_			

CONTINUOUS EMISSION MONITOR DOWNTIME REPORT

REPORTING QUARTER:		First, 2019	AQD FILE #: #0203 (AI ID 447)	
EMISSION UNIT(S):		FCC regenerator		
POLLUTANT MONITORED:		NOx and O2		
DATE/TIME	TOTAL DURATION (HRS)	CAUSE/CORRECTIVE ACTION		
a) Monitor malfunction				
Total	0.00	See FCC CO CEM downtime.		
b) Non-monitor malfunction				
Total	0.00	See FCC CO CEM downtime.		
c) QA calibration				
Total	0.00	See FCC CO CEM downtime.		
d) Other known causes				
Total	3.00	See FCC CO CEM downtime.		
e) Unknown causes				
Total	0.00	See FCC CO CEM downtime.		

MINNESOTA POLLUTION CONTROL AGENCY

AQDFILE#: #0203 (AI ID 447)

		LAOLOG L	MISSICI	TITE OF IT	REPORTIN	IG FORM				
POLLUTANT (circle one):	S 02	sox	NOx	co	CO2	<u>O2</u>	TRS	H2S	HCL	Opacity
	Other:									
					MONITOR	}				
REPORTING QUARTER:	First, 2019	<u>.</u>			MODEL:		ptima (Li	imas UV)	Gas Analyze	r
FACILITY:					MFR:	ABB				
St. Paul Park Refin	ning Co. LLC									
					EMISSION	N LIMIT AND	AVERAGE 1	TIME:		
EMISSION SUBJECT ITEM:	EQUI2					vd, O2 free				
					50 ppmv	d, O2 free	- 365 da	y rollin	g average	
	700									
EMISSION UNIT(S):	FCC regenerator				EMISSION					
					Consent	Decree Eft	tective 6	/30/06		
ASSOCIATED ITEMS:	DOLLT CA EDDA 17									
ASSOCIATED HEIMS.	EQUI164, TREA17	·								
PROCESS UNIT DESCRIPTION:	FOI	ITO ico f	luidie	ed catali	tia araal	ring unit				
PROCESS ONLY DESCRIPTION.						cing unit.	700 col.,,	n fau fu	actionation.	
		maceriar	5 IIOM	the rec	are rouce	ed to the i	ecc_corum	II TOT IT	actionacton.	
						TOTAL OPE	RATING HO	OURS		
						OF EMISSION		00,10	2160	
						OI LINIOON	514 61411.			
A. EMISSION DATA SUMMARY					B. CEM P	ERFORMANO	E SUMMA	RY		
1 DURATION OF EXCESS	EMISSIONS (HRS)		7 Day	365 Day	1	DURATION	OF CEM DO	OWNTIME	DURING	
a) Startup/Shutdown			0.00	0.00		SOURCE O	PERATION	(HRS)		
b) Control equipment			0.00	0.00	1	a) Monitor m	alfunction		0.00	
c) Process problems			0.00	0.00		b) Non-mon	itor malfunct	tion	0.00	
d) Other known causes			0.00	0.00	1	c) QA calibra	ation		0.00	
e) Unknown causes		_	0.00	0.00	1	d) Other kno	wn causes		3.00	
e) Unknown causes f) Soot blowing		_	0.00	0.00	1	, -			0.00	
1 '		Ξ				d) Other kno				
f) Soot blowing	;)		0.00	0.00	1	d) Other kno e) Unknown	causes	(S)	0.00	
f) Soot blowing g) Fuel problems	;)	=	0.00	0.00		d) Other kno	causes RATION (HR	! S)		
f) Soot blowing g) Fuel problems 2 TOTAL DURATION (HRS	;)		0.00	0.00		d) Other kno e) Unknown 2 TOTAL DUF	causes RATION (HR DF TOTAL	?S)	0.00	
f) Soot blowing g) Fuel problems 2 TOTAL DURATION (HRS 3 PERCENT OF TOTAL	;)	-	0.00 0.00 0.00	0.00 0.00 0.00		d) Other kno e) Unknown 2 TOTAL DUR 3 PERCENT (causes RATION (HR DF TOTAL	(S)	3.00	
f) Soot blowing g) Fuel problems 2 TOTAL DURATION (HRS 3 PERCENT OF TOTAL	;)	-	0.00 0.00 0.00	0.00 0.00 0.00		d) Other kno e) Unknown 2 TOTAL DUR 3 PERCENT (causes RATION (HR DF TOTAL	:S)	3.00	
f) Soot blowing g) Fuel problems 2 TOTAL DURATION (HRS 3 PERCENT OF TOTAL	FOR OPACITY, REC		0.00 0.00 0.00	0.00	3	d) Other kno e) Unknown 2 TOTAL DUR 3 PERCENT (CEM DOWN	causes RATION (HR DF TOTAL NTIME	<u></u>	0.00 3.00 0.14%	
f) Soot blowing g) Fuel problems 2 TOTAL DURATION (HRS 3 PERCENT OF TOTAL	,		0.00 0.00 0.00	0.00	3	d) Other kno e) Unknown 2 TOTAL DUR 3 PERCENT (CEM DOWN	causes RATION (HR DF TOTAL NTIME	<u></u>	0.00 3.00 0.14%	
f) Soot blowing g) Fuel problems 2 TOTAL DURATION (HRS 3 PERCENT OF TOTAL EXCESS EMISSIONS	FOR OPACITY, REC	ORD ALL TIN	0.00 0.00 0.00 0.00%	0.00 0.00 0.00 0.00\$	OR GASES	d) Other kno e) Unknown 2 TOTAL DUF B PERCENT (CEM DOWN	causes RATION (HR DF TOTAL NTIME	N HOURS.	0.00 3.00 0.14%	
f) Soot blowing g) Fuel problems 2 TOTAL DURATION (HRS 3 PERCENT OF TOTAL	FOR OPACITY, REC	ORD ALL TIN	0.00 0.00 0.00 0.00%	0.00 0.00 0.00 0.00\$	OR GASES	d) Other kno e) Unknown 2 TOTAL DUR 3 PERCENT (CEM DOWN	causes RATION (HR DF TOTAL NTIME	N HOURS.	0.00 3.00 0.14%	
f) Soot blowing g) Fuel problems 2 TOTAL DURATION (HRS 3 PERCENT OF TOTAL EXCESS EMISSIONS % Total Excess Emissions =	FOR OPACITY, REC	ORD ALL TIM	0.00 0.00 0.00 0.00* MES IN M	0.00 0.00 0.00 0.00\$ MINUTES. F	OR GASES	d) Other kno e) Unknown 2 TOTAL DUF B PERCENT (CEM DOWN	causes RATION (HR DF TOTAL NTIME	N HOURS.	0.00 3.00 0.14%	
f) Soot blowing g) Fuel problems 2 TOTAL DURATION (HRS 3 PERCENT OF TOTAL EXCESS EMISSIONS	FOR OPACITY, REC	ORD ALL TIN	0.00 0.00 0.00 0.00* MES IN M	0.00 0.00 0.00 0.00\$ MINUTES. F	OR GASES	d) Other kno e) Unknown 2 TOTAL DUF B PERCENT (CEM DOWN	causes RATION (HR DF TOTAL NTIME	N HOURS.	0.00 3.00 0.14%	
f) Soot blowing g) Fuel problems 2 TOTAL DURATION (HRS 3 PERCENT OF TOTAL EXCESS EMISSIONS % Total Excess Emissions =	FOR OPACITY, REC	ORD ALL TIM	0.00 0.00 0.00 0.00* MES IN M	0.00 0.00 0.00 0.00\$ MINUTES. F	OR GASES	d) Other kno e) Unknown 2 TOTAL DUF B PERCENT (CEM DOWN	causes RATION (HR DF TOTAL NTIME	N HOURS.	0.00 3.00 0.14%	
f) Soot blowing g) Fuel problems 2 TOTAL DURATION (HRS 3 PERCENT OF TOTAL EXCESS EMISSIONS % Total Excess Emissions =	FOR OPACITY, REC	ORD ALL TIM	0.00 0.00 0.00 0.00* MES IN M	0.00 0.00 0.00 0.00\$ MINUTES. F	OR GASES	d) Other kno e) Unknown 2 TOTAL DUF B PERCENT (CEM DOWN	causes RATION (HR DF TOTAL NTIME	N HOURS.	0.00 3.00 0.14%	
f) Soot blowing g) Fuel problems 2 TOTAL DURATION (HRS 3 PERCENT OF TOTAL EXCESS EMISSIONS % Total Excess Emissions = % Total CEM Downtime =	FOR OPACITY, REC	ORD ALL TIM	0.00 0.00 0.00 0.00* MES IN M	0.00 0.00 0.00 0.00\$ MINUTES. F Emissions / (OR GASES	d) Other kno e) Unknown 2 TOTAL DUF 3 PERCENT (CEM DOWN S, RECORD A	causes RATION (HR DF TOTAL NTIME	N HOURS.	0.00 3.00 0.14%	
f) Soot blowing g) Fuel problems 2 TOTAL DURATION (HRS 3 PERCENT OF TOTAL EXCESS EMISSIONS % Total Excess Emissions = % Total CEM Downtime =	FOR OPACITY, REC	ORD ALL TIM	0.00 0.00 0.00 0.00* MES IN M	0.00 0.00 0.00 0.00\$ MINUTES. F Emissions / (OR GASES	d) Other kno e) Unknown 2 TOTAL DUF 3 PERCENT (CEM DOWN S, RECORD A	causes RATION (HR DF TOTAL NTIME	N HOURS.	0.00 3.00 0.14%	
f) Soot blowing g) Fuel problems 2 TOTAL DURATION (HRS 3 PERCENT OF TOTAL EXCESS EMISSIONS % Total Excess Emissions = % Total CEM Downtime =	FOR OPACITY, REC	ORD ALL TIM	0.00 0.00 0.00 0.00* MES IN M	0.00 0.00 0.00 0.00\$ MINUTES. F Emissions / (OR GASES	d) Other kno e) Unknown 2 TOTAL DUF 3 PERCENT (CEM DOWN S, RECORD A	causes RATION (HR DF TOTAL NTIME	N HOURS.	0.00 3.00 0.14%	
f) Soot blowing g) Fuel problems 2 TOTAL DURATION (HRS 3 PERCENT OF TOTAL EXCESS EMISSIONS % Total Excess Emissions = % Total CEM Downtime =	FOR OPACITY, REC Tota CEI	ORD ALL TIM	0.00 0.00 0.00 0.00* MES IN M Excess I	0.00 0.00 0.00 0.00 0.00\$ MINUTES. F Emissions / Operating Time	OR GASES (Total Operate	d) Other kno e) Unknown 2 TOTAL DUF 3 PERCENT (CEM DOWN 5, RECORD A ating Time - C	CAUSES RATION (HR DF TOTAL NTIME LLL TIMES I	N HOURS	0.00 3.00 0.14%	eedances
f) Soot blowing g) Fuel problems 2 TOTAL DURATION (HRS 3 PERCENT OF TOTAL EXCESS EMISSIONS % Total Excess Emissions = % Total CEM Downtime = NOTE: CEM downtime is the	FOR OPACITY, REC Tota CEI	ORD ALL TIM al Duration of M Downtime / eported on re made, that	0.00 0.00 0.00 0.00 Excess I	0.00 0.00 0.00 0.00\$ MINUTES: F Emissions / G perating Tim	OR GASES (Total Operate EQUIZ for	d) Other kno e) Unknown 2 TOTAL DUF 3 PERCENT (CEM DOWN 5, RECORD A ating Time - C	CAUSES RATION (HR DF TOTAL NTIME LLL TIMES I	N HOURS	0.00 3.00 0.14%	eedances

REPORTING QUARTER:		First, 2019		AQD FILE #: #0203 (AI ID 447)
EMISSION UNIT(S):		FCC regenerator	<u> </u>	
POLLUTANT MONITORED:		SO2 ppmvd, O2 fre	е	
	TOTAL DURATION	MAX. CONCENTRATION		
DATE/TIME	(days)	(ppm), 7-day average	CAUSE/CORRECTIVE ACTION	
a) Startup/Shutdown				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00			
h) Cantral assistances				
b) Control equipment 1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00	_ NO excess entissions.		
c) Process problems				
1/1/2019				
4/1/2019_	0.00	No excess emissions.		
Total	0.00			
d) Other known causes				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00	_		
e) Unknown causes				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00			
f) Soot blowing				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00			
g) Fuel problems				
g) Fuel problems 1/1/2019				
4/1/2019		No excess emissions.		
4/1/2019 _ Total	0.00			
, 0.00	0.00			

REPORTING QUARTER:		First, 2019		AQD FILE#: #0203 (AI ID 447)
EMISSION UNIT(S):		FCC regenerator		
POLLUTANT MONITORED:		SO2 ppmvd, O2 fre	e	
	TOTAL	MAX.		
	DURATION	CONCENTRATION		
DATE/TIME	(HRS)	(ppm), 365-day average	CAUSE/CORRECTIVE ACTION	
a) Startup/Shutdown				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00			
b) Control equipment				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00			
c) Process problems				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00	NO excess emissions.		
d) Other known causes				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00			
a) Unknown agusas				
e) Unknown causes 1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00	110 000000 01110010115.		
f) Soot blowing				
1) Soot blowing 1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00			
g) Fuel problems				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00			

REPORTING QUARTER: First, 201		First, 2019	AQD FILE#: #0203 (AI ID 447)
EMISSION UNIT(S):		FCC regenerator	
POLLUTANT MONITORED:		SO2 ppmvd, O2 free	
DATE/TIME	TOTAL DURATION (HRS)	CAUSE/CORRECTIVE ACTION	
NOTE: CEM downtime is the	e same downti	me reported on the form for EQUI2 for	r CO ppm
a) Monitor malfunction			
Total	0.00	See FCC CO CEM downtime.	
b) Non-monitor malfunction			
Total	0.00	See FCC CO CEM downtime.	
c) QA calibration			
Total	0.00	See FCC CO CEM downtime.	
d) Other known causes			
Total	3.00	See FCC CO CEM downtime.	
e) Unknown causes			
Total	0.00	See FCC CO CEM downtime.	

AQD FILE#: #0203 (AI ID 447)

POLLUTANT (circle one):	SO2	sox	NOx	со	CO2	02	TRS	H2S	HCL	Opacity
	Other:	<u>.</u>	- 		MONITO	R				
REPORTING QUARTER:	First, 2019				MODEL:	Advance	Optima (Limas UV	Gas Analy	zer
FACILITY:					MFR:	ABB				
St. Paul Park R	efining Co. L	LC								
			<u> </u>		ENICOIO		\ A\/EDAOE			
EMISSION SUBJECT ITEM:	EOUI2					N LIMIT AND lbs/hr -			verage	
						12,57 111		<u> </u>		
EMISSION UNIT(S):	FCC regenerat	or			EMISSIO	N BASIS:	SIP for	SO2 NAAQS	3	
ASSOCIATED ITEMS:	EQUI164, TREA	17								
PROCESS UNIT DESCRIPTION	ON: E	QUI2 is a t	luidized	cata	alytic c	racking u	nit.			
		he material						column fo	or fraction	ation.
					TOTAL	PERATING	HOURS			
						SION UNIT:	_	2160		
[T=					
A. EMISSION DATA SUMMAR	(Y				B. CEM I	PERFORMA	NCE SUMM	IARY		
1 DURATION OF EXCE	ESS EMISSIONS (HRS)			1	DURATION	OF CEM D	OOWNTIME	DURING	
a) Startup/Shutdown			0.00		Ì	SOURCE (PERATION	N (HRS)		
b) Control equipment			0.00			a) Monitor i	malfunction		0.00	!
c) Process problems			0.00			b) Non-moi	nitor malfun	ction	0.00	
d) Other known cause	es		0.00			c) QA calib	ration		0.00	
e) Unknown causes			0.00			d) Other kn		\$	3.00	
f) Soot blowing		_	0.00		l	e) Unknowi	n causes		0.00	
g) Fuel problems			0.00							
2 TOTAL DURATION (•		0.00		1	? TOTAL DU	-		3.00	
3 PERCENT OF TOTA] 3	PERCENT				
EXCESS EMISSIONS	i		0.00%			CEM DOW	NTIME		0.14%	
	FOR OPACITY, R	ECORD ALL T	IMES IN MIN	UTES	S. FOR G	ASES, RECC	RD ALL TIP	MES IN HO	URS.	
% Total Excess Emissions =	T	otal Duration of	Excess Emi	ssion	ıs / (Total C	Operating Tir	ne - CEM D	owntime)		
% Total CEM Downtime =	С	EM Downtime	Total Opera	ating T	Time					
NOTE:										
CEM downtime is	the same dow	ntime repor	ted on th	e fo	orm for	EQUI2 for	CO ppm			
If no exceedances: I certify the there were no exceedances d			fy that I am f	amilia	ar with the					
SUBMITTED BY:	See certifica	•						DATE:		

REPORTING QUARTER:		First, 2019	AQDFILE# #0203 (AI ID 447)
EMISSION UNIT(S):		FCC regenerator	
POLLUTANT MONITORED:		S02	
	TOTAL		
DATE/TIME	DURATION (HRS)	MAX. CONCENTRATION (lbs/hr)	CAUSE/CORRECTIVE ACTION
a) Startup/Shutdown	()	(100)	970920911129171271011011
1/1/2019			
4/1/2019			
Total	0.00	<u>-</u>	
b) Control equipment			
1/1/2019			
4/1/2019_		<u></u>	
Total	0.00		
c) Process problems			
1/1/2019			
4/1/2019			
Total	0.00	_	
d) Other become access			
d) Other known causes			
1/1/2019			
4/1/2019 _ Total	0.00	_	
rotai	0.00		
e) Unknown causes			
1/1/2019			
4/1/2019			
Total	0.00		
f) Soot blowing			
1/1/2019			
4/1/2019			
Total	0.00	_	
g) Fuel problems			
1/1/2019			
4/1/2019_		_	
Total	0.00		

REPORTING QUARTER:		First, 2019	AQD FILE#: #0203 (AI ID 447)
EMISSION UNIT(S):		FCC regenerator	
POLLUTANT MONITORED:		SO2	
DATE/TIME	TOTAL DURATION (HRS)	CAUSE/CORRECTIVE ACTION	
NOTE: CEM downtime is	the same d	owntime reported on the form	t for EQUI2 for CO ppm
a) Monitor malfunction			
Total	0.00	See FCC SO2 ppm CEM downtime.	
b) Non-monitor malfunction			
Total	0.00	See FCC SO2 ppm CEM downtime.	
c) QA calibration			
Total	0.00	See FCC SO2 ppm CEM downtime.	
d) Other known causes			
Total	3.00	See FCC SO2 ppm CEM downtime.	
e) Unknown causes			
Total	0.00	_See FCC SO2 ppm CEM downtime.	

AQDFILE#: #0203 (AI ID 447) **EXCESS EMISSION AND CEM REPORTING FORM** sox POLLUTANT (circle one): SO₂ NOx CO CO₂ 02 TRS H2S HCL Opacity Other: MONITOR REPORTING QUARTER: MODEL: Advance Optima (Limas UV) Gas Analyzer First, 2019 FACILITY: MFR: ABB Paul Park Refining Co. LLC EMISSION LIMIT AND AVERAGE TIME: EMISSION SUBJECT ITEM: EQUI2 9.8 lb SOx/1000 lb coke burn - 7 day rolling avg EMISSION BASIS: EMISSION UNIT(S): FCC regenerator Consent Decree, Appendix I, and NSPS 60.104(b)(2), 60.104(c) ASSOCIATED ITEMS: EQUI164, TREA17 PROCESS UNIT DESCRIPTION: EQUI2 is a fluidized catalytic cracking unit. The materials from the FCC are routed to the FCC column for fractionation TOTAL OPERATING HOURS OF EMISSION UNIT: 2160 B. CEM PERFORMANCE SUMMARY A. EMISSION DATA SUMMARY 1 DURATION OF EXCESS EMISSIONS (HRS) 1 DURATION OF CEM DOWNTIME DURING SOURCE OPERATION (HRS) a) Startup/Shutdown 0.00 b) Control equipment a) Monitor malfunction 0.00 0.00 c) Process problems 0.00 b) Non-monitor malfunction 0.00 d) Other known causes c) QA calibration 0.00 0.00 e) Unknown causes d) Other known causes 3.00 f) Soot blowing 0.00 e) Unknown causes 0.00 g) Fuel problems 0.00 2 TOTAL DURATION (HRS) 2 TOTAL DURATION (HRS) 0.00 3.00 3 PERCENT OF TOTAL 3 PERCENT OF TOTAL **EXCESS EMISSIONS** CEM DOWNTIME 0.00% 0.14% FOR OPACITY, RECORD ALL TIMES IN MINUTES. FOR GASES, RECORD ALL TIMES IN HOURS. % Total Excess Emissions = Total Duration of Excess Emissions / (Total Operating Time - CEM Downtime) % Total CEM Downtime = CEM Downtime / Total Operating Time NOTE: CEM downtime is the same downtime reported on the form for EQUI2 for CO ppm

If no exceedances: I certify that the required analyses were made, that I am familiar with the results, and that to the best of my knowledge there were no exceedances during the reporting period. I certify that I am familiar with the information in this report and that to the best of my knowledge the information is valid.

SUBMITTED BY: See certification page at front of report DATE:

REPORTING QUARTER:		First, 2019	AQD FILE#: #0203 (AI ID 447)	
EMISSION UNIT(S):		FCC regenerator		
POLLUTANT MONITORED:		Lb SOX	<u></u>	
	TOTAL			
	DURATION	MAX. CONCENTRATION		
DATE/TIME	(HRS)	(lb Sox/ton), hourly average	CAUSE/CORRECTIVE ACTION	
a) Startup/Shutdown				
1/1/2019		No average periodical		
4/1/2019 _ Total	0.00	No excess emissions.		
lotai	0.00			
b) Control equipment				
1/1/2019				
4/1/2019_		No excess emissions.		
Total	0.00			
c) Process problems				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00			
d) Other known causes				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00			
e) Unknown causes				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00			
f) Soot blowing				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00			
g) Fuel problems				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00	_		

REPORTING QUARTER:		First, 2019	AQD FILE#: #0203 (AI ID 447)
EMISSION UNIT(S):		FCC regenerator	
POLLUTANT MONITORED) :	Lb SOX	
DATE/TIME	TOTAL DURATION (HRS)	CAUSE/CORRECTIVE ACTION	
NOTE: CEM downtime	is the same	downtime reported on the for	m for BQUI2 for CO ppm
a) Monitor malfunction			
Total	0.00	See FCC NOx or CO CEM downtime.	
b) Non-monitor malfunction			
Total	0.00	See FCC Nox or CO CEM downtime.	
c) QA calibration			
Total	0.00	See FCC NOx or CO CEM downtime.	
d) Other known causes			
Total	3.00	See FCC Nox or CO CEM downtime.	
e) Unknown causes			

Total

0.00

See FCC NOx or CO CEM downtime.

AQD FILE#: #0203 (AI ID 447)

POLLUTANT (circle one):	SO2	NOx	CO	CO2	02	TRS	H2S	HCL	Opacity
	Other:	Flow							
					MONITO)R			
REPORTING QUARTER:	First, 201	9			MODEL	Fuel Gas	s Flow Ra	ate/FG H2S	CEM
FACILITY:					MFR:				
St. Paul Park Refi	ning Co. LLC								
					EMISSI	ON LIMITS	AND AVER	RAGING TIME	Ε:
EMISSION SUBJECT ITEM:	EQUI3				2.62 1	b SO2/hr	- 3 hour	r rolling	avg.
					1.75 1	b SO2/mml	otu - 3 h	hour rolli	ng avg.
EMISSION UNIT(S):	No. 2 Crude	e Vacuum He	ater		EMISSI	ON BASIS:		SIP for S	OZ NAAOS
	5-B-1						•		
ASSOCIATED ITEMS:	COMG7, COM	320, EQUI16	3, EQUI175	, EQUI206,	STRU70,	COMG20			
					TOTAL	OPERATING	SHOURS	Total	
						SSION UNIT		2160	
									···
A. EMISSION DATA SUMMARY					B. CEM	PERFORM	ANCE SUM	MMARY	
1 DURATION OF EXCESS	EMISSIONS (H	RS)	lb/hr	lb/mmbtu	1	DURATIO	N OF CEM	DOWNTIME	DURING
a) Startup/Shutdown		_	0.00	0.00	4	SOURCE	OPERATIO	ON (HRS)	Fuel Gas
b) Control equipment		_	0.00	0.00	4	-	malfunction		0.00
c) Process problems			0.00	0.00	4	•	onitor malfu	nction	0.00
d) Other known causes		_	0.00	0.00	4	c) QA calit			0.00
e) Unknown causes			0.00	0.00	-	,	nown cause	es	4.00
f) Soot blowing		_	0.00	0.00	-	e) Unknow	n causes		0.00
g) Fuel problems	2)	_	0.00	0.00	┥ ,	TOTAL DI	IDATION (UDC)	4 00
2 TOTAL DURATION (HRS 3 PERCENT OF TOTAL	5)	-	0.00	0.00		TOTAL DU PERCENT	•	•	4.00
EXCESS EMISSIONS			0.000		}			L	
EXCESS EMISSIONS		_	0.00%	0.00%	-	CEM DOV	VINTIIVIE		0.19%
	FOR OPACIT	r, RECORD A	L TIMES IN I	MINUTES. FO	R GASES	, RECORD	ALL TIME:	S IN HOURS	
									
% Total Excess Emissions =		Total Duration	of Excess Em	nissions / (Tota	Operating	g Time - CE	M Downtim	ne)	
% Total CEM Downtime =		CEM Downtim	e / Total Oper	ating Time					
NOTES:									
					-				
If no exceedances: I certify that the									
during the reporting period. I certif SUBMITTED BY:	See certifi				ai io ine Di	cat of Hily KII	_	DATE:	ı ıs yallu.
= = -									

REPORTING QUARTER:		First, 2019	AQD FILE#: #0203 (AI ID 447)
EMISSION UNIT(S):		5-B-1	
POLLUTANT MONITORED:		SO2 lb/hr - 3 hour rolling average	
	TOTAL		
DATE/TIME	DURATION (HRS)	MAX. EMISSIONS RATE CAUSE/CORRECTIVE ACTION	
a) Startup/Shutdown			
1/1/2019			
4/1/2019 Total	0.00	_No excess emissions.	
Total	0.00		
b) Control equipment			
1/1/2019		Manager of the control of the contro	
4/1/2019 _ Total	0.00	_No excess emissions.	
rotta	0.00		
c) Process problems			
1/1/2019		N	
4/1/2019 _ Total	0.00	_No excess emissions.	
, o.c.i	0.00		
d) Other known causes			
1/1/2019		No average autorious	
4/1/2019 _ Total	0.00	_No excess emissions.	
	0.00		
e) Unknown causes			
1/1/2019 4/1/2019		No excess emissions.	
4/ 1/20 19 _ Total	0.00	NO excess emissions.	
f) Soot blowing			
1/1/2019 4/1/2019		No excess emissions.	
Total	0.00	NO excess emissions.	
g) Fuel problems 1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00		

REPORTING QUARTER:		First, 2019	AQD FILE #: #0203 (AI ID 447)
EMISSION UNIT(S):		5-B-1	
POLLUTANT MONITORED:		SO2 lb/mmbtu - 3 hour rolling average	_
DATECTIME	TOTAL DURATION	MAY EMISSIONS DATE: CAUSE/CORPECTIVE ACTION	
DATE/TIME	(HRS)	MAX. EMISSIONS RATE CAUSE/CORRECTIVE ACTION	
a) Startup/Shutdown 1/1/2019 4/1/2019		No excess emissions.	
Total	0.00	_ NO excess enhasions.	
b) Control equipment 1/1/2019 4/1/2019		No excess emissions.	
Total	0.00	NO excess emissions.	
c) Process problems 1/1/2019 4/1/2019		_No excess emissions.	
Total	0.00		
d) Other known causes 1/1/2019 4/1/2019 _ Total	0.00	_No excess emissions.	
1000	0.00		
e) Unknown causes 1/1/2019 4/1/2019 Total	0.00	_No excess emissions.	
f) Soot blowing 1/1/2019 4/1/2019 _ Total	0.00	No excess emissions.	
g) Fuel problems 1/1/2019 4/1/2019 _ Total	0.00	_No excess emissions.	

REPORTING QUARTER:		First, 2019	AQD FILE#: #0203 (AI ID 447)	
EMISSION UNIT(S):		5-B-1, fuel gas flow meter		
POLLUTANT MONITORED:		S02		
DATE/TIME	TOTAL DURATION (HRS)	CAUSE/CORRECTIVE ACTION		
a) Monitor malfunction				
Total	0.00	_		
b) Non-monitor malfunction				
Total	0.00	_		
c) QA calibration				
Total	0.00	-		
d) Other known causes 2/8/2019 6:00				
2/8/2019 10:00 Total	4.00	_Communications error		
e) Unknown causes				
Total	0.00	-		

AQD FILE #: #0203 (AI ID 447)

POLLUTANT (circle one):	SO2 NOx Other:			H2S HC	CL Opacity
REPORTING QUARTER:	First, 2019		MONITOR MODEL: MFR: ABB	Advance Optim	ma Limas 11
FACILITY:				· · · · · · · · · · · · · · · · · · ·	
St. Paul Park Refi	ining Co. LLC				
			EMISSION LIM	IIT AND AVERAGE	TIME:
			0.05 1bs/mmi	btu - 12 month	rolling average
EMISSION SUBJECT ITEM:	EQUI4		0.14 lbs/mml	btu - 3 hour ro	olling average
			EMISSION BAS	SIS:	
EMISSION UNIT(S):	Heater 2-B-3		BACT PSD, 4	OCFR 52.21, Min	ın. R. 7007.3000
ASSOCIATED ITEMS:	COMG7, EQUI163, EQU	I176, EQUI296	, STRU15 TOTAL OPERA OF EMISSION		<u>60</u>
A. EMISSION DATA SUMMAR			B. CEM PERFO	ORMANCE SUMMA	.RY
1 DURATION OF EXCES	` '				
	12 mo	3 hr	ľ	ION OF CEM DOW	
a) Startup/Shutdown	0.00	0.00		CE OPERATION (HF	
b) Control equipment	0.00	0.00	· · · · · ·	tor malfunction	0.00
c) Process problems	0.00	0.00	,	monitor malfunction	
d) Other known causes	0.00	0.00	1 '	alibration	0.00
e) Unknown causes	0.00	0.00	1 '	r known causes	1.00
f) Soot blowing	0.00	0.00	e) Unkn	nown causes	0.00
g) Fuel problems	0.00	0.00			
2 TOTAL DURATION (HF	RS) <u>0.00</u>	0.00		DURATION (HRS)	1.00
3 PERCENT OF TOTAL			- (NT OF TOTAL	
EXCESS EMISSIONS	0.00%	0.00%	CEM D	OWNTIME	0.05%
	FOR OPACITY, RECORD	ALL TIMES IN N	IINUTES. FOR G	ASES, RECORD AL	LL TIMES IN HOURS.
% Total Excess Emissions =	Total Durati	ion of Excess Emi	issions / (Total Ope	erating Time - CEM	Downtime)
% Total CEM Downtime =	CEM Down	time / Total Opera	ating Time		
NOTES:					<u> </u>
					
If no exceedances: I certify that no exceedances during the repoinformation is valid.					e best of my knowledge there were the best of my knowledge the
SUBMITTED BY:	See certification pag	ge at front of	report	DATE:	

REPORTING QUARTER:		First, 2019		AQD FILE #: #0203 (AI ID 447)
EMISSION UNIT(S):		Heater 2-B-3		
POLLUTANT MONITORED:		NOx lb/mmbtu (12	month rolling avg) a	and O2
DATE/TIME	DURATION	CONCENTRATION	CAUSE/CORRECTIVE A	ACTION
a) Startup/Shutdown 1/1/2019 4/1/2019		No excess emissions.		
Total	0.00			
b) Control equipment 1/1/2019 4/1/2019		No excess emissions.		
Total	0.00			
c) Process problems 1/1/2019 4/1/2019		No excess emissions.		
Total	0.00			
d) Other known causes 1/1/2019 4/1/2019 Total	0.00	_No excess emissions.		
e) Unknown causes 1/1/2019 4/1/2019 Total	0.00	_No excess emissions.		
f) Soot blowing 1/1/2019 4/1/2019 Total	0.00	_No excess emissions.		
g) Fuel problems 1/1/2019 4/1/2019		No excess emissions.		
Total	0.00			

REPORTING QUARTER:		First, 2019	AQD FILE #: #0203 (AI ID 447)
EMISSION UNIT(S):		Heater 2-B-3	
POLLUTANT MONITORED:		NOx 1b/mmbtu (3 h	r rolling avg) and O2
DATE/TIME	TOTAL DURATION (HRS)	MAX. CONCENTRATION (lbs/mmbtu)	CAUSE/CORRECTIVE ACTION
a) Startup/Shutdown 1/1/2019 4/1/2019	0.00	_No excess emissions.	
Total b) Control equipment 1/1/2019 4/1/2019		_No excess emissions.	
Total c) Process problems 1/1/2019 4/1/2019 Total	0.00	_No excess emissions.	
d) Other known causes 1/1/2019 4/1/2019 Total	0.00	_No excess emissions.	
e) Unknown causes 1/1/2019 4/1/2019 Total	0.00	_No excess emissions.	
f) Soot blowing 1/1/2019 4/1/2019 Total	0.00	No excess emissions.	
g) Fuel problems 1/1/2019 4/1/2019 Total	0.00	_No excess emissions.	

REPORTING QUARTER:		First, 2019	AQD FILE #: #0203 (AI ID 447)
EMISSION UNIT(S):		Heater 2-B-3	
POLLUTANT MONITORED:		NOx and O2	
DATE/TIME	TOTAL	CAUSE/CORRECTIVE ACTION	
a) Monitor malfunction			
Total	0.00	_	
b) Non-monitor malfunction			
Total	0.00	_	
c) QA calibration			
_	0.00		
d) Other known causes 3/20/2019 10:00 3/20/2019 11:00	1.00 1.00	_Preventative maintenance	
e) Unknown causes			
Total	0.00		

AQD FILE #: #0203 (AI ID 447)

POLLUTANT (circle one):	SO2	NOx	со	CO2	02	TRS	H2S	HCL	Opacity	
	Other:	Flow			MONITO	D				
REPORTING QUARTER:	First, 201	9					Flow Rat	e/FG H2S C	EM	
FACILITY:				1	MFR:					
St. Paul Park R	efining Co.	LLC			,					, <u></u>
					CMACCIO	N LIMITO A	ND AVEDA	CINIO TIME.		
EMISSION SUBJECT ITEM:	POUT4				EMISSIO			GING TIME: 3 hour rol	ling averag	7.0
EMIGGICIA GODDECT TIEM.	BQUIT							- 3 hour		
					•					
EMISSION UNIT(S):		e Charge He	eater	1	EMISSIO	N BASIS:		SIP for S	O2 NAAQS	
	2-B-3									
ASSOCIATED ITEMS:	COMG7. EOU	I163, EOUI1	176, EQUI296	6. STF	RU15					
		,	,							
				1	OPERAT	ING HOUR	S OF EMISS	SION UNIT:		
								Total	Fuel Gas	Natural Gas
								2160	2160	2160
A. EMISSION DATA SUMMA	ARY				B. CEM F	PERFORMA	NCE SUM	MARY		
1 DURATION OF EXC		IS (HRS)						OWNTIME D	URING	
		lb/hr	lb/mmbtu			SOURCE C	PERATION	(HRS)		
a) Startup/Shutdown		0.00	0.00						Fuel Gas	Natural Gas
b) Control equipmen		0.00	0.00	1		a) Monitor r	nalfunction		0.00	0.00
c) Process problems		0.00	0.00			-	nitor malfund	ction	0.00	0.00
d) Other known caus	ses	0.00	0.00			c) QA calibi			0.00	0.00
e) Unknown causes		0.00	0.00	- 1		-	own causes		0.00	0.00
f) Soot blowing		0.00	0.00			e) Unknowr	n causes		0.00_	0.00
g) Fuel problems	(UDC)	0.00	0.00		2	TOTAL DU	DATION (LI	BC)	0.00	0.00
2 TOTAL DURATION 3 PERCENT OF TOTAL		0.00	0.00			PERCENT	RATION (HI	K3)	0.00	0.00
EXCESS EMISSION		0.00%	0.00%		3	CEM DOW			0.00%	0.00%
	FOR OPACIT	Y, RECORD A	LL TIMES IN N	MINUTE	ES. FOR	GASES, RE	ECORD ALL	TIMES IN HO	DURS.	
% Total Excess Emissions =		Total Duration	n of Excess Em	nissions	/ (Total o	Operating T	ime - CEM [Downtime)		
% Total CEM Downtime =		CEM Downtin	ne / Total Oper	ating T	ime					
NOTES:			·	•						
NOTEO					-					
			•							
If no exceedances: I certify th exceedances during the reporvalid.	•	-						-	-	
SUBMITTED BY:	See certif	ication pag	ge at front	of re	eport	·····		DATE:		··

REPORTING QUARTER:		First, 2019		AQD FILE # #0203 (AI ID 447)
EMISSION UNIT(S):		2-B-3		
POLLUTANT MONITORED:		SO2 lb/hr - 3 hour	rolling average	
DATE/TIME	TOTAL DURATION (HRS)	MAX. EMISSIONS RATE	CAUSE/CORRECTIVE ACTION	ON.
a) Startup/Shutdown 1/1/2019 4/1/2019 Total	0.00	No excess emissions.		
b) Control equipment 1/1/2019 4/1/2019		No excess emissions.		
Total	0.00			
c) Process problems 1/1/2019 4/1/2019 _ Total	0.00	No excess emissions.		
d) Other known causes 1/1/2019 4/1/2019 Total	0.00	No excess emissions.		
e) Unknown causes 1/1/2019	0.00			
4/1/2019 _ Total	0.00	No excess emissions.		
f) Soot blowing 1/1/2019 4/1/2019 Total	0.00	No excess emissions.		
g) Fuel problems 1/1/2019 4/1/2019 _ Total	0.00	No excess emissions.		

REPORTING QUARTER:		First, 2019	AQD FILE # #0203 (AI ID 447)
EMISSION UNIT(S):		2-B-3	
POLLUTANT MONITORED:		SO2 lb/mmbtu - 3 hou	ur rolling average
	TOTAL DURATION		
DATE/TIME	(HRS)	MAX. EMISSIONS RATE	CAUSE/CORRECTIVE ACTION
a) Startup/Shutdown			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00	-	
b) Control equipment			
1/1/2019			
4/1/2019_		No excess emissions.	
Total	0.00		
c) Process problems			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00	-	
d) Other known causes			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00	140 CACCSS CHIISSIONS.	
e) Unknown causes			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00	THE EXCESS SITTED FOR IT.	
f) Soot blowing			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00	•	
g) Fuel problems			
1/1/2019			
4/1/2019 _		No excess emissions.	
Total _	0.00	-	

REPORTING QUARTER:		First, 2019		AQD FILE # #0203 (AI ID 447)
EMISSION UNIT(S):		2-B-3, Fuel Gas	Flow Rate	
POLLUTANT MONITORED:		S02		
DATE/TIME	TOTAL DURATION (HRS)	_CAUSE/CORRECTIV	E ACTION	
a) Monitor malfunction				
Total	0.00	-		
b) Non-monitor malfunction				
Total	0.00	-		
c) QA calibration				
	0.00	-		
d) Other known causes				
Total	0.00	-		
e) Unknown causes				
Total	0.00	-		

REPORTING QUARTER:		First, 2019	AQD FILE #: #0203 (AI ID 447)
EMISSION UNIT(S):		2-B-3, Natural Gas Flow Rate	
POLLUTANT MONITORED:		S02	
DATE/TIME	TOTAL DURATION (HRS)	CAUSE/CORRECTIVE ACTION	
a) Monitor malfunction			
Total	0.00	-	
b) Non-monitor malfunction			
Total	0.00	_	
c) QA calibration			
Total	0.00	_	
d) Other known causes			
Total	0.00	-	
e) Unknown causes			
Total	0.00	-	

AQD FILE#: #0203 (AI ID 447)

REPORTING QUARTER: First, 2 FACILITY: St. Paul Park Refining Co		MONITOR MODEL: Fuel Gas Flow Rate/FG H2S CEM MFR:
	. LLC	MFR:
St. Paul Park Refining Co	. LLC	
		EMISSION LIMITS AND AVERAGING TIME:
EMISSION SUBJECT ITEM: EQUI5		1.2 lb SO2/hr - 3 hr rolling avG.
		1.75 lb SO2/mmbtu - 3 hour rolling avg.
EMISSION UNIT(S): No. 1 C2	rude Vacuum heater	EMISSION BASIS: SIP for SO2 NAAQS
ASSOCIATED ITEMS: COMG7, E	EQUI163, EQUI178, STRU10	_
		TOTAL OPERATING HOURS
		OF EMISSION UNIT: 2160
A. EMISSION DATA SUMMARY		B. CEM PERFORMANCE SUMMARY
1 DURATION OF EXCESS EMISSION	ONS (HRS)	1 DURATION OF CEM DOWNTIME DURING
	lb/hr lb/mmbtu	SOURCE OPERATION (HRS)
a) Startup/Shutdown	0.00 0.00	
b) Control equipment	0.00 0.00	a) Monitor malfunction 0.00
c) Process problems	0.00 0.00	b) Non-monitor malfunction 0.00
d) Other known causes	0.00 0.00	c) QA calibration 0.00
e) Unknown causes	0.00 0.00	d) Other known causes 1.00
f) Soot blowing	0.00 0.00	e) Unknown causes 0.00
g) Fuel problems	0.00 0.00	
2 TOTAL DURATION (HRS)	0.00 0.00	2 TOTAL DURATION (HRS) 1.00
3 PERCENT OF TOTAL		3 PERCENT OF TOTAL
EXCESS EMISSIONS	0.00% 0.00%	CEM DOWNTIME 0.05%
FOR OPA	CITY, RECORD ALL TIMES IN MINUTES.	FOR GASES, RECORD ALL TIMES IN HOURS.
% Total Excess Emissions =	Total Duration of Excess Emissi	ons / (Total Operating Time - CEM Downtime)
% Total CEM Downtime =	CEM Downtime / Total Operatin	g Time
NOTES:	·	·
NOTES:		
		h the results, and that to the best of my knowledge there were no exceedances and that to the best of my knowledge the information is valid.
SUBMITTED BY: See cert	ification page at front of repo	DATE:

REPORTING QUARTER:		First, 2019	AQD FILE#: #0203 (AI ID 447)
EMISSION UNIT(S):		1-B-5	
POLLUTANT MONITORED:		S02 - 1b/hr	
DATE/TIME	TOTAL DURATION (HRS)	MAX. CONCENTRATION (lb/hr, 3-hour avg)	CAUSE/CORRECTIVE ACTION
a) Startup/Shutdown			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00	-	
b) Control equipment			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00	-	
c) Process problems			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00	•	
d) Other known causes			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00	•	
e) Unknown causes			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00	_	
f) Soot blowing			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00	-	
g) Fuel problems			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00	-	

REPORTING QUARTER:		First, 2019	AQDFILE#: #0203 (AI ID 447)	
EMISSION UNIT(S):		1-B-5		
POLLUTANT MONITORED:		S02 - lb/mmbtu		
DATE/TIME	TOTAL DURATION (HRS)	MAX. CONCENTRATION (lb/mmBtu)	CAUSE/CORRECTIVE ACTION	
DATE/TIME	(1113)	(ID/IIIIIBIU)	CAUSE/CORRECTIVE ACTION	
a) Startup/Shutdown 1/1/2019 4/1/2019		No excess emissions.		
Total	0.00	•		
b) Control equipment 1/1/2019 4/1/2019 Total	0.00	No excess emissions.		
c) Process problems 1/1/2019 4/1/2019		No excess emissions.		
Total	0.00			
d) Other known causes 1/1/2019 4/1/2019 Total	0.00	No excess emissions.		
e) Unknown causes 1/1/2019 4/1/2019 Total	0.00	No excess emissions.		
Total	0.00			
f) Soot blowing 1/1/2019 4/1/2019 Total	0.00	No excess emissions.		
g) Fuel problems 1/1/2019 4/1/2019 Total	0.00	No excess emissions.		

REPORTING QUARTER:		First, 2019	AQD FILE#: #0203 (AI ID 447)
EMISSION UNIT(S):		1-B-5, Fuel Gas Flow Rate	
POLLUTANT MONITORED:		S02	
DATE/TIME	TOTAL DURATION (HRS)	CAUSE/CORRECTIVE ACTION	
a) Monitor malfunction	(1110)	STODE FOR THE PROPERTY OF THE	
Total -	0.00	- ,	
b) Non-monitor malfunction	0.00	·	
by Non Monte Manager			
Total	0.00	-	
c) QA calibration			
Total -	0.00		
d) Other known causes 1/28/19 16:00			
1/28/19 17:00 _ Total	1.00 1.00	Communications error	
e) Unknown causes			
Total -	0.00	•	

AQD FILE #: #0203 (AI ID 447)

POLLUTANT (circle one):	SO2	NOx	co	CO2	02	TRS	H2S	HCL	Opacity
	Other:	Flow		_					
DEDOCTING OURDED					MONITO				
REPORTING QUARTER:	First, 201	L9		_	MODEL	-:	Fuel Ga	as Flow Rate	e/FG H2S CEM
FACILITY:					MFR:				
St. Paul Park R	efining Co.	LLC							
				-					
					EMISSI	ON LIMIT	AND AVE	ERAGE TIME:	
EMISSION SUBJECT ITEM:	EQUI6			-				rolling avg	
						1.75 lb	SO2/mm	ubtu - 3 hou	r rolling avg.
EMISSION UNIT(S):	Crude Char	ge Heater			EMISSI	ON BASIS	S:	SIP for SO	OZ NAAOS
2001071 4(0)	Heater 1-F			=					
				-					
ASSOCIATED ITEMS:	COMG7, COM	G14, EQUI1	63, EQUI182	, EQUI183	, STRU	69			
					OPERA	TING HOL	URS OF E	EMISSION UNI	T:
								Total	
								2160	
A. EMISSION DATA SUMMA	RY		·		B. CEM	l Performa	ance Sun	nmary	
DURATION OF EXC		NS (HRS)						M DOWNTIME	DURING
1		, ,	lb/hr	lb/mmbtu		SOURCE	OPERAT	ΓΙΟΝ (HRS)	
a) Startup/Shutdown		_	0.00	0.00					Fuel Gas
b) Control equipment			0.00	0.00		a) Monitor	r malfunct	ion	0.00
c) Process problems		_	0.00	0.00		b) Non-m	onitor mal	lfunction	0.00
d) Other known caus	es		0.00	0.00	<u>]</u>	c) QA cali	ibration		0.00
e) Unknown causes			0.00	0.00	j	d) Other I	known cau	uses	0.00
f) Soot blowing			0.00	0.00		e) Unknow	wn causes	S	0.00
g) Fuel problems			0.00	0.00	}				
2 TOTAL DURATION (HRS)	_	0.00	0.00	2	TOTAL D	URATION	I (HRS)	0.00
3 PERCENT OF TOTA	L				3	PERCEN	T OF TO1	ΓAL	
EXCESS EMISSION	S	-	0.00%	0.00%	1	CEM DO	WNTIME		0.00%
					<u>l</u>				
	FOR OPACIT	Y, RECORD A	ALL TIMES IN	MINUTES. I	FOR GAS	SES, REC	ORD ALL	TIMES IN HO	JRS.
% Total Excess Emissions =		Total Duration	of Excess Em	issions / (To	tal Opera	ating Time	- CEM Do	owntime)	
					·	-		ŕ	
NOTES:									
								·	
									
If no exceedances: I certify the	at the required a	analyses were	made, that I an	n familiar wit	h the res	ults, and th	hat to the	best of my know	wledge there were no exceedances
during the reporting period. I									
SUBMITTED BY:	See certif	ication pag	ge at front	of repor	t		_	DATE:	

REPORTING QUARTER:		First, 2019	AQD FILE #: #0203 (AI ID 447)
EMISSION UNIT(S):		EQUI6_	
POLLUTANT MONITORED:		SO2 lb/hr	
	TOTAL		
DATE/TIME	DURATION (HRS)	MAX. CONCENTRATION	CAUSE/CORRECTIVE ACTION
a) Startup/Shutdown			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00		
b) Control equipment			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00	_	
c) Process problems			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00	_	
d) Other known causes			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00	-	
e) Unknown causes			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00	-	
f) Soot blowing			
1) 300t blowing 1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00	_	
g) Fuel problems			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00	•	

REPORTING QUARTER:		First, 2019	AQD FILE # #0203 (AI ID 447)
EMISSION UNIT(S):		EQUI6	
POLLUTANT MONITORED:		SO2 lb/mmbtu	
	TOTAL		
DATE/TIME	DURATION (HRS)	MAX. CONCENTRATION	CAUSE/CORRECTIVE ACTION
a) Startup/Shutdown			
1/1/2019 4/1/2019		No excess emissions.	
4/1/2019 Total	0.00	_ivo excess emissions.	
Total	0.00		
b) Control equipment			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00		
a) Durance archieme			
c) Process problems 1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00	NO excess emissions.	
Total	0.00		
d) Other known causes			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00	=	
e) Unknown causes			
1/1/2019 4/1/2019		No excess emissions.	
4/1/2019 Total	0.00	_ No excess emissions.	
iotai	0.00		
f) Soot blowing			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00	-	
a) Final analytema			
g) Fuel problems			
1/1/2019 4/1/2019		No excess emissions.	
Total	0.00	_ NO EXCESS ETHISSIONS.	
iolai	0.00		

REPORTING QUARTER:		First, 2019	AQD FILE # #0203 (AI ID 447)
EMISSION UNIT(S):		Heater 1-B-7	
POLLUTANT MONITORED:		Fuel Gas Flow Rate	
DATE/TIME	TOTAL DURATION (HRS)	CAUSE/CORRECTIVE ACTION	
a) Monitor malfunction			
Total	0.00	-	
b) Non-monitor malfunction			
Total	0.00	-	
c) QA calibration			
Total	0.00	-	
d) Other known causes			
Total	0.00	-	
e) Unknown causes			
Total	0.00	-	

AQDFILE#: #0203 (AI ID 447)

POLLUTANT (circle one):	SO2	NOx	co	CO2	O2	TRS	H2S	HCL	Opacity
	Other:	Flow							
					MONITO	R			
REPORTING QUARTER:	First, 2019				MODEL:		Fuel Gas	Flow Rat	e/FG H2S CEM
FACILITY:					MFR:				
St. Paul Park Ref	ining Co. LLC				_				
					EMISSIO	N LIMIT	S AND AVE	RAGING TIN	ΛE:
EMISSION SUBJECT ITEM:	EQUI7								colling avg.
					3	1.75 1	o SO2/mmb	tu - 3 hoi	ır rolling avg.
EMISSION UNIT(S):	Distillate Uni	finer			EMISSIO	N BASI	S:	SIP for S	O2 NAAOS
	29-B-1, 29-B-2								
ASSOCIATED ITEMS:	COMG7, EQUI163	, EQUI184,	STRU68						
							ING HOURS	,	
					OF EMIS	SION U	NIT:	2160	_
A. EMISSION DATA SUMMARY	<u>,</u>				B. CEM F	PERFOR	MANCE SU	MMARY	
1 DURATION OF EXCES		;)	-						
1		lb/hr	lb/mmbtu		1 [DURATIO	ON OF CEM	DOWNTIME	DURING
a) Startup/Shutdown		0.00	0.00			SOURCE	OPERATIO	ON (HRS)	
b) Control equipment		0.00	0.00		8	a) Monito	or malfunctio	n	0.00
c) Process problems		0.00	0.00		1) Non-n	nonitor malfu	nction	0.00
d) Other known causes		0.00	0.00			c) QA ca	libration		2.00
e) Unknown causes		0.00	0.00		0	d) Other	known cause	es	0.00
f) Soot blowing		0.00	0.00			e) Unkno	wn causes		0.00
g) Fuel problems		0.00	0.00						
2 TOTAL DURATION (HR	RS)	0.00	0.00		2 7	TOTAL E	DURATION (HRS)	2.00
3 PERCENT OF TOTAL	,				L		IT OF TOTA	,	
EXCESS EMISSIONS		0.00%	0.00%		1		WNTIME		0.09%
	FOR OPACITY, RE	CORD ALL TI	MES IN MINUTE:	S. F	J OR GASE:	S. RECO	ORD ALL TIM	MES IN HOU	RS.
L									
% Total Excess Emissions =		Total Duration	on of Excess Emi	ssion	s / (Total C	Operatin	g Time - CEN	M Downtime)	
% Total CEM Downtime =		CEM Downti	ime / Total Opera	ating `	Time				
NOTES:									
		· · · · · ·					 -		
If no exceedances: I certify that the during the reporting period. I certify									
SUBMITTED BY:	See certificat		•				•	DATE:	

REPORTING QUARTER:		First, 2019	AQD FILE #:	#0203 (AI ID 447)	
EMISSION UNIT(S):		29-B-1, 29-B-2		_	
POLLUTANT MONITORED:		S02 - 1b/hr			
	TOTAL DURATION				
DATE/TIME	(HRS)	MAX. CONCENTRATION	CAUSE/CORRECTIVE ACTION		
a) Startup/Shutdown					
1/1/2019					
4/1/2019		No excess emissions.			
Total	0.00	-			
b) Control equipment					
1/1/2019					
4/1/2019		No excess emissions.			
Total	0.00	•			
c) Process problems					
1/1/2019					
4/1/2019		No excess emissions.			
Total	0.00	THO EXCESS CITIOSICITS.			
d) Other known causes					
1/1/2019					
4/1/2019		No excess emissions.			
Total	0.00	_ TO EXCESS SITIOS, SITE.			
e) Unknown causes					
1/1/2019					
4/1/2019		No excess emissions.			
Total	0.00				
f) Soot blowing					
1/1/2019					
4/1/2019		No excess emissions.			
Total	0.00				
g) Fuel problems					
1/1/2019					
4/1/2019		No excess emissions.			
Total	0.00				

REPORTING QUARTER:		First, 2019	AQDFILE#: #0203 (AI ID 447)
EMISSION UNIT(S):		29-B-1, 29-B-2	
POLLUTANT MONITORED:		S02 - lb/mmbtu	
	TOTAL DURATION		
DATE/TIME	(HRS)	MAX. CONCENTRATION	CAUSE/CORRECTIVE ACTION
a) Startup/Shutdown			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00	-	
b) Control equipment			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00	•	
c) Process problems			
1/1/2019			
4/1/2019		No excess emissions.	
Total .	0.00	•	
d) Other known causes			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00	-	
e) Unknown causes			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00	•	
f) Soot blowing			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00	-	
g) Fuel problems			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00	=	

REPORTING QUARTER:		First, 2019	AQD FILE #: #0203 (AI ID 447)
EMISSION UNIT(S):		29-B-1, 29-B-2 Fuel Gas Flow Rate	
POLLUTANT MONITORED:		S02	
DATE/TIME	TOTAL DURATION (HRS)	CAUSE/CORRECTIVE ACTION	
DATEMBLE	(11110)	GAGGE/GOTTLES IT E AG HOLY	
a) Monitor malfunction			
Total	0.00	-	
b) Non-monitor malfunction			
Total	0.00	-	
c) QA calibration			
3/26/2019 8:00 3/26/2019 9:00 3/26/2019 10:00	1.00	Annual meter calibration - 29-B-1	
3/26/2019 11:00	1.00	Annual meter calibration - 29-B-2	
Total	2.00		
d) Other known causes			
Total	0.00	-	
Total	0.00		
e) Unknown causes			
Total .	0.00	-	

AQD FILE #: #0203 (AI ID 447)

POLLUTANT (circle one):	SO2	NOx	CO	CO2	02	TRS	H2S	HCL	Opacity	
	Other:	Flow								
			-	-	MONITO	R				
REPORTING QUARTER:	First, 2019			_	MODEL:		Fuel Gas	s Flow Rat	te/FG_H2S_CEM	
FACILITY:					MFR:					
St. Paul Park Re	efining Co. LL	С			-			_		
				-						
					EMISSI	ON LIMI	TS AND AVE	RAGING TI	ME:	
EMISSION SUBJECT ITEM:	EQUI8			_					lling average	
					-	1.75 1	Lb SO2/mmb	tu - 3 ho	ur rolling avg.	
EMISSION UNIT(S):	Naphtha Unif	iner Heat	er		EMISSIC	ON BAS	IS:	SIP for S	SO2 NAAOS	
,	3-B-1, 3-B-2	, 3-B-3		_				-		
ASSOCIATED ITEMS:	COMG9, COMG7	, EQUI163	, EQUI185,	STRU1	9					
					TOTAL (DERA.	TING HOURS	3		
					OF EMIS			2160		
									-	
A. EMISSION DATA SUMMA	RY	-			B. CEM	PERFO	RMANCE SI	JMMARY		
1 DURATION OF EXCE	ESS EMISSIONS (1		ION OF CEN		E DURING	
		lb/hr	lb/mmbtu			SOURC	E OPERATI	ON (HRS)		
a) Startup/Shutdown		0.00	0.00	-						
b) Control equipment		0.00	0.00	-	ł		tor malfunction		0.00	
c) Process problems		0.00	0.00	-	l	•	monitor malfu	Inction	0.00	
d) Other known cause e) Unknown causes	35	0.00	0.00	-	1	,	alibration	-00	0.00	
f) Soot blowing		0.00	0.00	-			r known caus own causes	65	0.00	
g) Fuel problems		0.00	0.00	-	·	e, onkn	OWII Causes		0.00	
2 TOTAL DURATION (F	4PQ)	0.00	0.00	-	2	TOTAL	DURATION ((LIDC)	0.00	
3 PERCENT OF TOTAL	•	0.00	0.00	-	1		NT OF TOTA		0.00	
EXCESS EMISSIONS		0.00%	0.00%		l		OWNTIME	\L	0.00%	
270200 211110010111	-		0.000	•		O _ III	0111111111		0.000	
	FOR OPACITY,	RECORD A	LL TIMES IN M	IINUTE	S. FOR	GASES,	, RECORD A	LL TIMES IN	N HOURS.	
% Total Excess Emissions =		Total Durat	ion of Excess E	mission	ns / (Total	Operat	ing Time - Cl	=M Downtim	e)	
% Total CEM Downtime =			time / Total Ope		,	-			- ,	
		CEIVI DOWN	une / Total Op	eraung	IIIIe					
NOTES:										
										
	 									
If no exceedances: I certify that	at the required anal	yses were m	ade, that I am f	familiar	with the r	esults,	and that to th	e best of my	knowledge there were no	
exceedances during the reporti										is
valid.										
SUBMITTED BY:	See certific	ation pag	e at front	of re	port			DATE:		

REPORTING QUARTER:		First, 2019	AQD FILE #: #0203 (AI ID 447)
EMISSION UNIT(S):		3-B-1, 3-B-2, 3-B-3	
POLLUTANT MONITORED:		S02 - 1b/hr	
DATE/TIME	TOTAL DURATION (HRS)	MAX. CONCENTRATION	CAUSE/CORRECTIVE ACTION
a) Startup/Shutdown			
1/1/2019 4/1/2019		No excess emissions.	
4/1/2019 _ Total	0.00	_ No excess emissions.	
Total	0.00		
b) Control equipment 1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00	_	
c) Process problems 1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00		
d) Other known causes			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00		
e) Unknown causes			
1/1/2019		Ma average anniantama	
4/1/2019 _ Total	0.00	No excess emissions.	
1000	0.00		
f) Soot blowing			
1/1/2019			
4/1/2019 _		No excess emissions.	
Total	0.00		
g) Fuel problems			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00		

REPORTING QUARTER:		First, 2019	AQD FILE #: #0203 (AI ID 447)	
EMISSION UNIT(S):		3-B-1, 3-B-2, 3-B-3	· · · · · · · · · · · · · · · · · · ·	
POLLUTANT MONITORED:		S02 - lb/mmbtu		
DATE/TIME	TOTAL DURATION (HRS)	MAX. CONCENTRATION CA	AUSE/CORRECTIVE ACTION	
a) Startup/Shutdown 1/1/2019 4/1/2019 _	The state of the s	_ No excess emissions.		
Total	0.00			
b) Control equipment 1/1/2019 4/1/2019 _		_ No excess emissions.		
Total	0.00			
c) Process problems 1/1/2019 4/1/2019 Total	0.00	_ No excess emissions.		
d) Other known causes 1/1/2019 4/1/2019 _ Total	0.00	_No excess emissions.		
Total	0.00			
e) Unknown causes 1/1/2019 4/1/2019 Total	0.00	_ No excess emissions.		
f) Soot blowing 1/1/2019 4/1/2019 _		_No excess emissions.		
Total	0.00			
g) Fuel problems 1/1/2019 4/1/2019 _		_ No excess emissions.		
Total	0.00			

REPORTING QUARTER:		First, 2019	AQDFILE#: #0203 (AI ID 447)
EMISSION UNIT(S):		3-B-1,2,3 Fuel Gas Flow Rate	
POLLUTANT MONITORED:		<u>802</u>	
DATE/TIME	TOTAL DURATION (HRS)	CAUSE/CORRECTIVE ACTION	
a) Monitor malfunction			
Total	0.00	_	
b) Non-monitor malfunction			
Total	0.00	_	
c) QA calibration			
Total	0.00	_	
d) Other known causes			
Total	0.00	_	
e) Unknown causes		_	
Total	0.00		

AQD FILE #: #0203 (AI ID 447)

POLLUTANT (circle one):	SO2	NOx	co co	02 02	TRS	H2S	HCL	Opacity	
	Other:	Flow							
REPORTING QUARTER:	First, 2019			MONITO MODEL		Fuel Gas	Flow Pate	e/FG H2S CEM	
THE ORTHO GOTTER.	1115c/ 2015			WODEL		racr das	TIOW RACE	E/FG HZB CEM	
FACILITY:				MFR:					
St. Paul Park R	Refining Co. LL	C	· · · · · · · · · · · · · · · · · · ·						
				EMICCI	OAL LIBART	C AND AVE	DACINO TIN	nc.	
EMISSION SUBJECT ITEM:	EOIIT 9						RAGING TIM	⊫: olling average	
ENTIOSION SOBSECT TIEN.	EQ019							r rolling average	
				•					
EMISSION UNIT(S):	Platformer Ch	arge Heater		EMISSI	ON BASIS	S: <u>.s</u>	SIP for SO	2 NAAQS	
	3-B-4								
ASSOCIATED ITEMS:	COMG9, COMG7,	EQUI163, E	QUI186, STRU	<u> </u>					
				TOTAL (DEPAT	ING HOURS			
					SSION U		2160		
				0. E			2100		
A. EMISSION DATA SUMMA	ARY			B. CEM	PERFOR	MANCE SU	MMARY		
1 DURATION OF EXC	ESS EMISSIONS (HRS)		1	DURATIO	ON OF CEM	DOWNTIME	DURING	
		lb/hr	lb/mmbtu		SOURCE	OPERATIO	N (HRS)		
a) Startup/Shutdown		0.00	0.00						
b) Control equipmen		0.00	0.00			r malfunction		0.00	
c) Process problems		0.00	0.00		•	ionitor malfur	nction _	0.00	
d) Other known caus	ses	0.00	0.00		c) QA cal		_	0.00	
e) Unknown causes		0.00	0.00		•	known cause	es _	0.00	
f) Soot blowing g) Fuel problems		0.00	0.00		e) Unkno	wn causes		0.00	
_ · · · · ·	(UDC)		0.00		TOTAL 5	LIDATION (IDO)		
2 TOTAL DURATION	• •	0.00	0.00	1		URATION (F	-	0.00	
3 PERCENT OF TOTA	-			1		IT OF TOTAL	-		
EXCESS EMISSION	15	0.00%	0.00%	ł	CEM DO	WNTIME	_	0.00%	
	FOR OPACITY, R	ECORD ALL TI	MES IN MINUTE	S. FOR G	ASES, RE	ECORD ALL	TIMES IN H	OURS.	
% Total Excess Emissions =		Total Duration	of Excess Emiss	sions / (Total	Operatin	ng Time - CE	M Downtime))	
% Total CEM Downtime =		CEM Downtim	ie / Total Operatii	ng Time					
NOTES:									
									
If no exceedances: I certify the during the reporting period. I									
SUBMITTED BY:	See certificat	tion page at	front of re	eport			DATE: _		

REPORTING QUARTER:		First, 2019	AQD FILE # #0203 (AI ID 447)
EMISSION UNIT(S):		3-B-4	
POLLUTANT MONITORED:		S02 - lb/hr	
DATE/TIME D	TOTAL	S) MAX. CONCENTRATION CAUS	E/CORRECTIVE ACTION
a) Startup/Shutdown 1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00	- No excess cimesions.	
b) Control equipment			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00	<u> </u>	
c) Process problems			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00		
d) Other known causes			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00		
e) Unknown causes			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00		
f) Soot blowing			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00		
g) Fuel problems			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00		

REPORTING QUARTER:	First, 2019	AQD FILE # #0203 (AI ID 447)
EMISSION UNIT(S):	3-B-4	
POLLUTANT MONITORED:	802 - lb/mmbtu	_
	OTAL	
DATE/TIME DURA	TION (HRS) MAX. CONCENTRATION CAL	JSE/CORRECTIVE ACTION
a) Startup/Shutdown		
1/1/2019		
4/1/2019	No excess emissions.	
Total	0.00	
b) Control equipment		
1/1/2019		
4/1/2019	No excess emissions.	
Total	0.00	
c) Process problems		
1/1/2019		
4/1/2019	No excess emissions.	
	0.00	
d) Other known causes		
1/1/2019		
4/1/2019	No excess emissions.	
	0.00	
e) Unknown causes		
1/1/2019 4/1/2019	No excess emissions.	
	0.00	
f) Soot blowing		
1/1/2019		
4/1/2019	No excess emissions.	
Total	0.00	
g) Fuel problems		
1/1/2019		
4/1/2019	No excess emissions.	
Total	0.00	

REPORTING QUARTER:		First, 2019	AQDFILE#: #0203 (AI ID 447)
EMISSION UNIT(S):		3-B-4 Fuel Gas Flow Rate	
POLLUTANT MONITORED:		S02	
DATE/TIME	TOTAL DURATION (HRS) CAUSE/CORRECTIVE ACTION	
a) Monitor malfunction			
Total	0.00	_	
b) Non-monitor malfunction			
Total	0.00	_	
c) QA calibration			
Total	0.00	_	
d) Other known causes			
Total	0.00	-	
e) Unknown causes			
Total	0.00	_	

AQD FILE #: #0203 (AI ID 447)

POLLUTANT (circle one): SO2	NOx CO	CO2 O2 TRS H2S HCL Opacity
Other:	Flow	
$\overline{}$		MONITOR
REPORTING QUARTER: First, 201	19	MODEL: Fuel Gas Flow Rate/FG H2S CEM
FACILITY:		MFR:
St. Paul Park Refining Co	. LLC	
		-
		EMISSION LIMITS AND AVERAGING TIME:
EMISSION SUBJECT ITEM: EQUI10	· · · · · · · · · · · · · · · · · · ·	1.68 lb SO2/hr - 3 hr rolling average
		1.75 lb SO2/mmbtu - 3 hour rolling avg.
EMISSION UNIT(S): Platformer	r interheater #1	EMISSION BASIS: SIP for SO2 NAAQS
3-B-7		- -
ASSOCIATED ITEMS: COMG9, COM	AGG BOUTICS TOUTING OF	TIPDITE C
A330CIATED ITEMS. COMG9, COM	MG7, EQUI163, EQUI187, ST	SIRUbb
		TOTAL OPERATING HOURS
		OF EMISSION UNIT: 2160
		p-1-7-7-
A. EMISSION DATA SUMMARY	NIC (LIDO)	B. CEM PERFORMANCE SUMMARY
1 DURATION OF EXCESS EMISSIC	lb/hr lb/mmbtu	1 DURATION OF CEM DOWNTIME DURING
a) Startup/Shutdown	0.00 0.00	SOURCE OPERATION (HRS)
b) Control equipment	0.00 0.00	a) Monitor malfunction 0.00
c) Process problems	0.00 0.00	b) Non-monitor malfunction 0.00
d) Other known causes	0.00 0.00	c) QA calibration 0.00
e) Unknown causes	0.00 0.00	d) Other known causes 0.00
f) Soot blowing	0.00 0.00	e) Unknown causes 0.00
g) Fuel problems	0.00 0.00	
2 TOTAL DURATION (HRS)	0.00 0.00	2 TOTAL DURATION (HRS) 0.00
3 PERCENT OF TOTAL		3 PERCENT OF TOTAL
EXCESS EMISSIONS	0.00% 0.00%	CEM DOWNTIME 0.00%
FOR OBACII	TV PECOPO ALL TIMES IN MIN	NUTES. FOR GASES, RECORD ALL TIMES IN HOURS.
POR OF AGI	TI, RECORD ALL TIMES IN WITH	NOTES. FOR GADES, RECORD ALE TIMES IN FIGURES.
% Total Excess Emissions =	Total Duration of Excess En	Emissions / (Total Operating Time - CEM Downtime)
% Total CEM Downtime =	CEM Downtime / Total Ope	perating Time
NOTES:		
If no avecadances: I contify that the various	analyses were made that I f	formiliar with the country and that to the best of any large day the
		familiar with the results, and that to the best of my knowledge there were no exceedances this report and that to the best of my knowledge the information is valid.
SUBMITTED BY: See certif		

REPORTING QUARTER:		First, 2019	AQD FILE # #0203 (AI ID 447)
EMISSION UNIT(S):		3-B-7	
POLLUTANT MONITORED:		S02 - 1b/hr	
	TOTAL		
	DURATION		
DATE/TIME	(HRS)	MAX. CONCENTRATION (CAUSE/CORRECTIVE ACTION
a) Startup/Shutdown			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00	_	
b) Control equipment			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00	140 0,0003 01113310113.	
c) Process problems			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00		
d) Other known causes			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00		
e) Unknown causes			
1/1/2019		Maria de la contraction de la	
4/1/2019 Total	0.00	_No excess emissions.	
lotai	0.00		
f) Soot blowing			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00	_	
g) Fuel problems			
g) Fuel problems 1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00	_ 140 640655 61115510115.	
i Otal	0.00		

REPORTING QUARTER:		First, 2019	AQD FILE #	# #0203 (AI ID 447)	
EMISSION UNIT(S):		3-B-7		_	
POLLUTANT MONITORED:		S02 - lb/mmbtu			
DATE/TIME	TOTAL DURATION (HRS)	MAX. CONCENTRATION	CAUSE/CORRECTIVE ACTION		
a) Startup/Shutdown 1/1/2019 4/1/2019 _ Total	0.00	_No excess emissions.			
b) Control equipment 1/1/2019 4/1/2019 _ Total	0.00	_No excess emissions.			
c) Process problems 1/1/2019 4/1/2019 _ Total	0.00	_No excess emissions.			
d) Other known causes 1/1/2019 4/1/2019 _ Total	0.00	_ No excess emissions.			
e) Unknown causes 1/1/2019 4/1/2019 _ Total	0.00	_No excess emissions.			
f) Soot blowing 1/1/2019 4/1/2019 _ Total	0.00	_No excess emissions.			
g) Fuel problems 1/1/2019 4/1/2019 _ Total	0.00	_No excess emissions.			

REPORTING QUARTER:		First, 2019	AQD FILE #: #0203 (AI ID 447)
EMISSION UNIT(S):		3-B-7 Fuel Gas Flow Rate	
POLLUTANT MONITORED:		S02	
DATE/TIME	TOTAL DURATION (HRS)	CAUSE/CORRECTIVE ACTION	
a) Monitor malfunction			
Total -	0.00	_	
b) Non-monitor malfunction			
Total	0.00	_	
c) QA calibration			
Total -	0.00	_	
d) Other known causes			
Total -	0.00	_	
e) Unknown causes			
Total -	0.00	_	

AQD FILE #: #0203 (AI ID 447)

POLLUTANT (circle one):	SO2	NOx	CO	CO2	O2	TRS	H2S	HCL	Opacity	
	Other:	Flow								
				_	MONITO	₹				
REPORTING QUARTER:	First, 2019			-	MODEL:		Fuel Gas	Flow Rat	e/FG H2S CE	м
FACILITY:					MFR:					
St. Paul Park F	Refining Co. LLC	3		_	_					
				_						
					EMISSIO	N LIMIT	S AND AVE	RAGING TIN	ΛE:	
EMISSION SUBJECT ITEM:	EQUI11			_	_1	.08 lk	502/hr -	3 hour m	colling avg.	
					_1	.75 lk	SO2/mmbt	u - 3 hou	ir rolling a	.vg.
EMISSION UNIT(S):	Platformer Int	erheater #	2	_	EMISSIO	N BASI	S: <u>.s</u>	SIP for SO	02_NAAQS	_
	3-B-8			_						
ASSOCIATED ITEMS:	COMG9, COMG7,	EQUI163, E	QUI188, S7	rru65						
							ING HOURS			
					OF EMIS	SION U	NIT:	2160		
A. EMISSION DATA SUMMA	ARY		_		B. CEM F	ERFOR	RMANCE SU	MMARY		
1 DURATION OF EXC		HRS)								
	·	lb/hr	lb/mmbtu		1 [URATIO	ON OF CEM	DOWNTIME	DURING	
a) Startup/Shutdowr	1	0.00	0.00		s	OURCE	E OPERATIO	N (HRS)		
b) Control equipmen	nt	0.00	0.00		a) Monitor malfunction 0.00					
c) Process problems	i .	0.00	0.00	-	b) Non-monitor malfunction 0.00					-
d) Other known caus	ses	0.00	0.00		c	QA cal	libration	_	0.00	•
e) Unknown causes		0.00	0.00		d) Other	known cause	es	0.00	•
f) Soot blowing		0.00	0.00		е) Unkno	wn causes	-	0.00	_
g) Fuel problems		0.00	0.00							-
2 TOTAL DURATION	(HRS)	0.00	0.00	•	2 T	OTAL D	URATION (I	∃RS)	0.00	
3 PERCENT OF TOTA	AL			-	3 PERCENT OF TOTAL					- !
EXCESS EMISSION	NS	0.00%	0.00%	-	c	EM DO	WNTIME	-	0.00%	-
	FOR OPACITY, RI	ECORD ALL T	IMES IN MIN	UTES.	FOR GA	SES, RE	ECORD ALL	TIMES IN H	OURS.	
% Total Excess Emissions =		Total Duration	of Excess E	mission	s / (Total	Oneratir	na Time - CE	M Downtime	o)	
						operatii	ig tillio oz	W DOWNLING	••	
% Total CEM Downtime =		CEM Downtin	ne / Total Opi	erating	rime					
NOTES:				_						
	 									
										
If no exceedances: I certify th	nat the required analy	ses were mad	e that Iam f	amiliar v	with the re	sulte ar	nd that to the	best of my l	cnowledge them	were no exceedances
during the reporting period. I										
SUBMITTED BY:	See certificat	ion page a	t front of	frepo	rt			DATE:		

REPORTING QUARTER:		First, 2019	AQD	FILE#: #0203 (AI ID 447)	
EMISSION UNIT(S):		3-B-8			
POLLUTANT MONITORED:		S02 - lb/hr			
DATE/TIME	TOTAL DURATION (HRS)	MAX. CONCENTRATION	CAUSE/CORRECTIVE ACT	ON	
a) Startup/Shutdown 1/1/2019 4/1/2019		No excess emissions.			
Total	0.00				
b) Control equipment 1/1/2019 4/1/2019 Total		No excess emissions.			
c) Process problems 1/1/2019 4/1/2019 Total		No excess emissions.			
d) Other known causes 1/1/2019 4/1/2019 Total		No excess emissions.			
e) Unknown causes 1/1/2019 · 4/1/2019 Total		No excess emissions.			
f) Soot blowing 1/1/2019 4/1/2019 Total		No excess emissions.			
g) Fuel problems 1/1/2019 4/1/2019 Total	0.00	No excess emissions.			

REPORTING QUARTER:		First, 2019	_ AQD FILE #	#: #0203 (AI ID 447)	
EMISSION UNIT(S):		3-B-8		_	
POLLUTANT MONITORED:		S02 - lb/mmbtu	_		
	TOTAL				
DATE/TIME D	URATION (HRS	MAX. CONCENTRATION CAUS	SE/CORRECTIVE ACTION		
a) Startup/Shutdown 1/1/2019 4/1/2019		No excess emissions.			
Total	0.00	_ No excess emissions.			
b) Control equipment 1/1/2019 4/1/2019 Total	0.00	_No excess emissions.			
c) Process problems 1/1/2019 4/1/2019 Total	0.00	_No excess emissions.			
d) Other known causes 1/1/2019 4/1/2019 Total	0.00	_No excess emissions.			
e) Unknown causes 1/1/2019 4/1/2019 Total	0.00	_No excess emissions.			
f) Soot blowing 1/1/2019 4/1/2019 Total	0.00	_No excess emissions.			
g) Fuel problems 1/1/2019 4/1/2019 Total	0.00	_No excess emissions.			

REPORTING QUARTER:		First, 2019	AQD FILE #: #0203 (AI ID 447)	
EMISSION UNIT(S):		3-B-8 Fuel Gas Flow Rate		
POLLUTANT MONITORED:		S02		
DATE/TIME	TOTAL DURATION (HRS)	CAUSE/CORRECTIVE ACTION		
a) Monitor malfunction				
Total	0.00	-		
b) Non-monitor malfunction				
Total	0.00	-		
c) QA calibration				
Total	0.00	-		
d) Other known causes				
Total	0.00	-		
e) Unknown causes				
Total	0.00	-		

AQD FILE #: #0203 (AI ID 447)

POLLUTANT (circle one):	SO2	NOx	со	CO2	02	TRS	H2S	HCL	Opacity	
	Other:	Flow		_						
					MONITO	R				
REPORTING QUARTER:	First, 2019			-	MODEL:		Fuel Gas	Flow Rate	e/FG H2S CEM	
FACILITY:					MFR:					
St. Paul Park Re	efining Co. LL	2								
				-						
	 			-	EMISSIC	N LIMIT	AND AVERA	GE TIME:		
EMISSION SUBJECT ITEM:	EQUI12			_	_(0.76 lb	S02/hr - :	3 hour ro	lling average	
				_					rolling avg.	
ENALCSION LINUT(S)	Desulfurizer	Vester			EMISSIC	N DACIC	S	31D 5 0	22 11700	
EMISSION UNIT(S):				=	EMISSIC	IN DASIS). <u> </u>	SIP for S	JZ_NAAQS	
	Heater 34-B-1			-						
ASSOCIATED ITEMS:	COMG7, COMG14	EOIII 163	E∩IIT189 MR	029 STRII64						
AUGUSTICE TIENS.	COMBT, COMBI	, EQUITOS,	EQUITED, MK	025, BIR004	-					
					-	TOTAL O	PERATING H	IOURS		
							SION UNIT:		2159	
A. EMISSION DATA SUMMA	RY				B. CEM	Performa	ance Summa	ry		
DURATION OF EXC	ESS EMISSIONS	(HRS)			1 1	DURATIO	ON OF CEM D	OWNTIME	DURING	
1			lb/hr	lb/MMBtu		SOURCE	OPERATION	l (HRS)		
a) Startup/Shutdown			0.00	0.00	4					
b) Control equipment	t		0.00	0.00		a) Monito	r malfunction		0.00	
c) Process problems			0.00	0,00	<u> </u>	b) Non-m	onitor malfund	ction	0.00	
d) Other known caus	es		0.00	0.00	1	c) QA cal			1.00	
e) Unknown causes			0.00	0.00	7	•	known causes	3	0.00	
f) Soot blowing			0.00	0.00	•	e) Unkno	wn causes		0.00	
g) Fuel problems			0.00	0.00						
2 TOTAL DURATION (0.00	0.00	7		URATION (H	RS)	1.00	
3 PERCENT OF TOTA					3 PERCENT OF T					
EXCESS EMISSION	S		0.00%	0.00%	- '	CEM DO	WNTIME		0.05%	
										
	FOR OPACITY, I	RECORD ALL	TIMES IN MINI	UTES. FOR G	ASES, RE	CORD A	LL TIMES IN I	HOURS.		
% Total Excess Emissions =		Total Duration	n of Excess Em	issions / (Total	Operating	Time - C	EM Downtime	9)		
% Total CEM Downtime = NOTES:			ne / Total Oper	ating Time						
						_				
				-				-		
If no exceedances: I certify th										during
the reporting period. I certify the			•		ne best of r	my knowl	ledge the infor	mation is va	alid.	
SUBMITTED BY:	See certifica	tion page a	t front of :	report			E	DATE:		

REPORTING QUARTER:		First, 2019		AQD FILE #: #0203 (AI ID 447)
EMISSION UNIT(S):		Heater 34-B-1		_
POLLUTANT MONITORED:		SO2 lb/hr		
DATE	TOTAL DURATION	MAY CONCENTRATION	CAUSE/CORRECTIVE ACTION	
DATE/TIME	(HRS)	MAX. CONCENTRATION	CAUSE/CORRECTIVE ACTION	
a) Startup/Shutdown 1/1/2019 4/1/2019 _ Total	0.00	_No excess emissions.		
b) Control equipment 1/1/2019 4/1/2019 _ Total	0.00	_ No excess emissions.		
Total	0.00			
c) Process problems 1/1/2019 4/1/2019 _ Total	0.00	_ No excess emissions.		
d) Other known causes 1/1/2019 4/1/2019 Total	0.00	_No excess emissions.		
e) Unknown causes 1/1/2019 4/1/2019 _ Total	0.00	_No excess emissions.		
f) Soot blowing 1/1/2019 4/1/2019 _ Total	0.00	No excess emissions.		
g) Fuel problems 1/1/2019 4/1/2019 _ Total	0.00	_No excess emissions.		

REPORTING QUARTER:		First, 2019		AQD FILE #: #0203 (AI ID 447)
EMISSION UNIT(S):		Heater 34-B-1		_
POLLUTANT MONITORED:		SO2 lb/mmbtu		
DATE/TIME	TOTAL DURATION (HRS)	MAX. CONCENTRATION	CAUSE/CORRECTIVE ACTION	
a) Startup/Shutdown 1/1/2019				
4/1/2019 _ Total	0.00	_ No excess emissions.		
b) Control equipment 1/1/2019 4/1/2019 _ Total	0.00	_No excess emissions.		
c) Process problems 1/1/2019 4/1/2019 _ Total	0.00	_No excess emissions.		
d) Other known causes 1/1/2019 4/1/2019 Total	0.00	_No excess emissions.		
e) Unknown causes 1/1/2019 4/1/2019 _ Total	0.00	_No excess emissions.		
f) Soot blowing 1/1/2019 4/1/2019 _ Total	0.00	_No excess emissions.		
g) Fuel problems 1/1/2019 4/1/2019 _ Total	0.00	_No excess emissions.		

REPORTING QUARTER:		First, 2019	AQD FILE # #0203 (AI ID 447)
EMISSION UNIT(\$):		Heater 34-B-1	
POLLUTANT MONITORED:		Fuel Gas Flow Rate	
DATE/TIME	TOTAL DURATION (HRS)	CAUSE/CORRECTIVE ACTION	
a) Monitor malfunction			
Total -	0.00	_	
b) Non-monitor malfunction			
Total -	0.00	_	
c) QA calibration 2/26/2019 15:00 2/26/2019 16:00 _ Total	1.00 1.00	Annual meter calibration	
d) Other known causes			
Total	0.00	_	
e) Unknown causes			
Total	0.00	_	

AQD FILE #: #0203 (AI ID 447)

POLLUTANT (circle one):	SO2	NOx	CO	CO2	02	TRS	H2S	HCL	Opacity
	Other:	Flow							
				-	MONITO	R			
REPORTING QUARTER:	First, 20	19		_	MODEL	;	Fuel Gas	Flow Rate	e/FG H2S CEM
FACILITY:					MFR:				
St. Paul Park	Refining Co	. LLC			WII IX.				
001 - 44211				_					
				_	EMISSIO	ON LIMIT	AND AVERA	AGE TIME:	
EMISSION SUBJECT ITEM	: EQUI13			_		2.62 lk	502/hr -	3 hour r	olling avg.
					-	1.75 lk	SO2/mmbt	u - 3 hou	r rolling avg.
EMISSION UNIT(S):	Hot Oil He	eater			FMISSIO	ON BASIS	3· .	SIP for SC	OZ NAAOS
	Heater 34	-B-2		_	2		- <u>-</u>	201 00	
				_					
ASSOCIATED ITEMS:	COMG7, COI	1G14, EQUI16	3, EQUI190	, EQUI191,	STRU64				
					OPERA	TING HO	URS OF EMI		:
								Total	
							-	2160	
A. EMISSION DATA SUMM	IARY				B. CEM	Performa	ance Summa	ary	
DURATION OF EX	CESS EMISSION	ONS (HRS)	<u> </u>				ON OF CEM		DURING
1			lb/hr	lb/mmbtu		SOURCE	OPERATIO	N (HRS)	
a) Startup/Shutdow	vn	_	0.00	0.00	_			_	
b) Control equipme	ent	_	0.00	0.00	_	a) Monito	or malfunction	1 _	0.00
c) Process problem	ns	-	0.00	0.00	1	b) Non-m	nonitor malfur	nction _	0.00
d) Other known car	uses	_	0.00	0.00	_	c) QA ca	libration	_	0.00
e) Unknown cause:	s	_	0.00	0.00]	d) Other	known cause	es _	2.00_
f) Soot blowing		_	0.00	0.00	_	e) Unkno	wn causes	_	0.00
g) Fuel problems		-	0.00	0.00	j				
2 TOTAL DURATION	N (HRS)	_	0.00	0.00	2	TOTAL D	DURATION (H	HRS)	2.00
3 PERCENT OF TO	TAL				3	PERCEN	IT OF TOTAL	_	
EXCESS EMISSIO	NS	_	0.00%	0.00%	_	CEM DO	WNTIME	_	0.09%
 					L				
	FOR OPACIT	TY, RECORD A	LL TIMES IN N	MINUTES. FOI	R GASES,	RECOR	D ALL TIMES	S IN HOURS	
% Total Excess Emissions =	=	Total Duration	of Excess Em	nissions / (Tota	Operating	g Time - (CEM Downtin	ne)	
NOTES: There was zero	fuel oil r	untime duri	og the guar	ter					
WO'LO. Inere was zero	Tuci Oil I	dirime durin	ig the quar	cer.				·	
 									
If no exceedances: I certify during the reporting period.									edge there were no exceedances
SUBMITTED BY:	•	ication pag		•	and that to	c bost	•	DATE:	illiadoli W Tuliu.
SSSTIED DT.		F-3					- '	-/ \ I E.	

REPORTING QUARTER:		First, 2019		AQD FILE #: #0203 (AI ID 447)
EMISSION UNIT(S):		Heater 34-B-2		-
POLLUTANT MONITORED:		SO2 lb/hr		
	TOTAL			
	DURATION			
DATE/TIME	(HRS)	MAX. CONCENTRATION	CAUSE/CORRECTIVE ACTION	
a) Startup/Shutdown				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00			
b) Control equipment				
1/1/2019		Na anna anniarian		
4/1/2019 _ Total	0.00	No excess emissions.		
iotai	0.00			
c) Process problems				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00	-		
d) Other known causes				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00	_140 000000 011110010110.		
e) Unknown causes				
1/1/2019		No susses surfacione		
4/1/2019 _ Total	0.00	No excess emissions.		
iotai	0.00			
f) Soot blowing				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00	-		
g) Fuel problems				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00			

REPORTING QUARTER:		First, 2019		AQD FILE #: #0203 (AI ID 447)
EMISSION UNIT(S):		Heater 34-B-2		-
POLLUTANT MONITORED:		SO2 lb/mmbtu		
	TOTAL			
	DURATION			
DATE/TIME	(HRS)	MAX. CONCENTRATION	CAUSE/CORRECTIVE ACTION	
a) Startup/Shutdown				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00			
b) Control equipment				
1/1/2019				
4/1/2019 _		No excess emissions.		
Total	0.00			
c) Process problems				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00	_ NO CACCAS CITIASIONS.		
. 5.41	0.00			
d) Other known causes				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00	_		
e) Unknown causes				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00	NO excess emissions.		
7000,	0.00			
f) Soot blowing				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00	-		
g) Fuel problems				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00	5,,5000 011110010110,		

REPORTING QUARTER:		First, 2019	AQDFILE#: #0203 (AI ID 447)
EMISSION UNIT(S):		Heater 34-B-2	
POLLUTANT MONITORED:		Fuel Gas Flow Rate	
DATE/TIME	TOTAL DURATION (HRS)	CAUSE/CORRECTIVE ACTION	
a) Monitor malfunction			
Total	0.00	-	
b) Non-monitor malfunction			
Total	0.00	-	
c) QA calibration			
Total	0.00	-	
d) Other known causes			
2/26/19 10:00 2/26/19 11:00 2/26/19 13:00	1.00	Communications error	
2/26/19 14:00 Total	1.00 2.00	Communications error	
e) Unknown causes			
Total	0.00	-	

AQD FILE #: #0203 (AI ID 447)

POLLUTANT (circle one):	SO2	(NOX)	CO	CO2(O2)	TRS	H2S	HCL	Opacity
	Other:							
				- MONI	TOR			
REPORTING QUARTER:	First, 201	9		MFR:	ABB	-		
				Mode	l: Advar	nce Optin	na Limas	11
FACILITY:				<u> </u>				
St. Paul Park Re	fining Co.	LLC		_				
				_ EMIS	SION LIMI	it and ave	ERAGE TIM	E:
				_	0.050 1	bs/mmbtu	- 365 da	y rolling average
EMISSION SUBJECT ITEM:	EQUI14							
				EMIS	SION BAS	SIS:		
EMISSION UNIT(S):	Heater 32-1	3-1			Consent	Decree		
ASSOCIATED ITEMS:								
, account Les mains.				-				
				TOTA	L OPERA	TING HOU	IRS	
					MISSION I		2160	
						-		•
A. EMISSION DATA SUMMA	ARY			B. CE	M PERFC	RMANCE	SUMMARY	,
1 DURATION OF EXCE	SS EMISSION	S (HRS)						
		365 day		1	DURATIO	N OF CEM	1 DOWNTIN	1E DURING
a) Startup/Shutdown		0.00			SOURCE	OPERATION	ON (HRS)	
b) Control equipment		0.00		1	a) Monitor	malfunctio	n	0.00
c) Process problems		0.00		1	b) Non-mo	onitor malfu	unction	0.00
d) Other known cause	es	0.00		ı	c) QA calil	bration		1.00
e) Unknown causes		0.00		1	d) Other k	nown caus	es	0.00
f) Soot blowing		0.00		1	e) Unknov	wn causes		0.00
g) Fuel problems		0.00		1				
2 TOTAL DURATION (F	HRS)	0.00		2	TOTAL D	URATION ((HRS)	1.00
3 PERCENT OF TOTAL	L			3	PERCEN'	T OF TOTA	AL ,	
EXCESS EMISSIONS	3	0.00%		1	CEM DOV	NNTIME		0.05%
	FOR OPACITY	Y, RECORD A	LL TIMES	IN MINUTES	. FOR GA	SES, REC	ORD ALL T	IMES IN HOURS.
% Total Excess Emissions =		Total Duration	of Evene	s Emissions /	(Total On	ereting Tim	e - CEM Da	wyntimo)
						craung min	ie - CLIVI DC	withine)
% Total CEM Downtime =		CEM Downtin	ne / I otal (Operating Tim	ie			
NOTES:								
<u></u>								
 								
		·						
								pest of my knowledge there were
no exceedances during the re information is valid.	eporting period.	recently that is	am iamilia	with the infol	mation in	шиз героп	anu mat to t	the best of my knowledge the
	Coo combis	lantice :	A A	ont of	o ===		DATE	
SUBMITTED BY:	See certif:	cation pag	e at iro	one or repo	DI.C		DATE:	

REPORTING QUARTER:		First, 2019	AQD FILE #:	#0203 (AI ID 447)			
EMISSION UNIT(S):		Heater 32-B-1 (EQUI14)					
POLLUTANT MONITORED:		NOx (365 day roll	ing avg) and 02				
DATE/TIME	DURATION	CONCENTRATION	CAUSE/CORRECTIVE ACTION				
a) Startup/Shutdown							
1/1/2019							
4/1/2019		No excess emissions.					
Total	0.00						
b) Control equipment							
1/1/2019							
4/1/2019		No excess emissions.					
Total	0.00						
c) Process problems							
1/1/2019							
4/1/2019		No excess emissions.					
Total	0.00						
d) Other known causes							
1/1/2019							
4/1/2019		No excess emissions.					
Total	0.00						
e) Unknown causes							
1/1/2019							
4/1/2019		No excess emissions.					
Total	0.00						
f) Soot blowing							
1/1/2019							
4/1/2019		No excess emissions.					
Total	0.00						
g) Fuel problems							
1/1/2019							
4/1/2019		No excess emissions.					
Total	0.00						

REPORTING QUARTER:		First, 2019	AQD FILE #: #0203 (AI ID 447)
EMISSION UNIT(S):		Heater 32-B-1 (EQUI14)	
POLLUTANT MONITORED:		NOx and O2	
DATE/TIME	TOTAL DURATION (HRS)	CAUSE/CORRECTIVE ACTION	
a) Monitor malfunction			
Total	0.00	<u>-</u>	
b) Non-monitor malfunction			
Total	0.00	-	•
c) QA calibration 1/28/2019 9:00 1/28/2019 10:00 Total	1.00 1.00	_Quarterly audit	
d) Other known causes			
Total	0.00	_	
e) Unknown causes			
Total	0.00	-	

AQD FILE #: #0203 (AI ID 447)

MONITOR REPORTING QUARTER: First, 2019 MODEL: Fuel Gas Flow Rate/FG H2S CEM FACILITY: MFR: St. Paul Park Refining Co. LLC	
REPORTING QUARTER: First, 2019 MODEL: Fuel Gas Flow Rate/FG H2S CEM FACILITY: MFR:	
FACILITY: MFR:	
EMISSION LIMIT AND AVERAGE TIME:	
EMISSION SUBJECT ITEM: EQUI14 2.97 lb S02/hr - 3 hour rolling average	
1.75 lb SO2/mmbtu - 3 hour rolling avg.	
EMISSION BASIS: SIP for SO2 NAAOS (Effective 9-10-2009)	
EMISSION UNIT(S): HDH Heater	
32-B-1	
ASSOCIATED ITEMS:	
COMG7, COMG14, EQUI163, EQUI192, STRU63	
CONG1, CONG14, EQ01192, SIRO63	
TOTAL OPERATING HOURS	
OF EMISSION UNIT: 2160	
A. EMISSION DATA SUMMARY B. CEM Performance Summary	
DURATION OF EXCESS EMISSIONS (HRS) 1 DURATION OF CEM DOWNTIME DURING	
1 Ib/hr Ib/mmbtu SOURCE OPERATION (HRS)	
a) Startup/Shutdown 0.00 0.00 Fuel Gas	
b) Control equipment 0.00 0.00 a) Monitor malfunction 0.00	
c) Process problems 0.00 0.00 b) Non-monitor maifunction 0.00	
d) Other known causes 0.00 0.00 c) QA calibration 1.00	
e) Unknown causes 0.00 0.00 d) Other known causes 0.00 0.00 e) Unknown causes 0.00	
g) Fuel problems 0.00 0.00	
2 TOTAL DURATION (HRS) 0.00 0.00 2 TOTAL DURATION (HRS) 1.00	
I 3 PERCENT OF TOTAL I 3 PERCENT OF TOTAL	
3 PERCENT OF TOTAL EXCESS EMISSIONS 0.00% 0.00% 0.00% 0.00% 0.00% 0.00%	
	-
EXCESS EMISSIONS 0.00% CEM DOWNTIME 0.05%	
EXCESS EMISSIONS 0.00% CEM DOWNTIME 0.05%	
EXCESS EMISSIONS 0.00% 0.00% CEM DOWNTIME 0.05% FOR OPACITY, RECORD ALL TIMES IN MINUTES. FOR GASES, RECORD ALL TIMES IN HOURS. % Total Excess Emissions = Total Duration of Excess Emissions / (Total Operating Time - CEM Downtime)	
EXCESS EMISSIONS 0.00% 0.00% CEM DOWNTIME 0.05% FOR OPACITY, RECORD ALL TIMES IN MINUTES. FOR GASES, RECORD ALL TIMES IN HOURS.	
EXCESS EMISSIONS 0.00% 0.00% CEM DOWNTIME 0.05% FOR OPACITY, RECORD ALL TIMES IN MINUTES. FOR GASES, RECORD ALL TIMES IN HOURS. % Total Excess Emissions = Total Duration of Excess Emissions / (Total Operating Time - CEM Downtime)	
EXCESS EMISSIONS 0.00% 0.00% CEM DOWNTIME 0.05% FOR OPACITY, RECORD ALL TIMES IN MINUTES. FOR GASES, RECORD ALL TIMES IN HOURS. % Total Excess Emissions = Total Duration of Excess Emissions / (Total Operating Time - CEM Downtime)	
EXCESS EMISSIONS 0.00% 0.00% CEM DOWNTIME 0.05% FOR OPACITY, RECORD ALL TIMES IN MINUTES. FOR GASES, RECORD ALL TIMES IN HOURS. % Total Excess Emissions = Total Duration of Excess Emissions / (Total Operating Time - CEM Downtime)	
EXCESS EMISSIONS 0.00% 0.00% CEM DOWNTIME 0.05% FOR OPACITY, RECORD ALL TIMES IN MINUTES. FOR GASES, RECORD ALL TIMES IN HOURS. % Total Excess Emissions = Total Duration of Excess Emissions / (Total Operating Time - CEM Downtime) NOTES:	
EXCESS EMISSIONS 0.00% 0.00% CEM DOWNTIME 0.05% FOR OPACITY, RECORD ALL TIMES IN MINUTES. FOR GASES, RECORD ALL TIMES IN HOURS. % Total Excess Emissions = Total Duration of Excess Emissions / (Total Operating Time - CEM Downtime)	during

REPORTING QUARTER:		First, 2019	AQD FILE #: #0203 (AI ID 447)
EMISSION UNIT(S):		32-B-1	_
POLLUTANT MONITORED:		SO2 lb/hr	
	TOTAL		
	DURATION		
DATE/TIME	(HRS)	MAX. CONCENTRATION CAUSE/CORRECTIVE ACTION	
a) Startup/Shutdown			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00		
b) Control equipment			
1/1/2019			
4/1/2019 _		_No excess emissions.	
Total	0.00		
c) Process problems			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00	_140 0,0000 011110010113.	
, 2.2	0.00		
d) Other known causes			
1/1/2019			
4/1/2019_		_ No excess emissions.	
Total	0.00	-	
a) Halmana anna			
e) Unknown causes 1/1/2019			
4/1/2019		No excess emissions.	
4/ 1/2019 _ Total	0.00	_ NO excess eniissions.	
7014	0.00		
f) Soot blowing			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00	_	
a) Frankrichters			
g) Fuel problems			
1/1/2019 4/1/2019		No excess emissions.	
4/1/2019 _ Total	0.00	INO EXCESS CITIESSIONS.	
iolai	0.00		

REPORTING QUARTER:		First, 2019	AQD FILE #: #0203 (AI ID 447)
EMISSION UNIT(S):		32-B-1	·
POLLUTANT MONITORED:		SO2 lb/mmbtu	
DATE/TIME	TOTAL DURATION (HRS)	MAX. CONCENTRATION CAUSE/CORRECTIVE AC	TION
a) Startup/Shutdown			
a) startup/shutdown 1/1/2019 4/1/2019 Total	0.00	_No excess emissions.	
b) Control equipment 1/1/2019 4/1/2019		_No excess emissions.	
Total	0.00		
c) Process problems 1/1/2019 4/1/2019 Total	0.00	_No excess emissions.	
d) Other known causes 1/1/2019 4/1/2019 _ Total	0.00	_No excess emissions.	
e) Unknown causes 1/1/2019 4/1/2019 Total	0.00	_No excess emissions.	
f) Soot blowing 1/1/2019 4/1/2019 _ Total	0.00	_No excess emissions.	
g) Fuel problems 1/1/2019 4/1/2019 _ Total	0.00	_No excess emissions.	

REPORTING QUARTER:		First, 2019	AQD FILE #: #0203 (AI ID 447)
EMISSION UNIT(S):		Heater 32-B-1	
POLLUTANT MONITORED:		Fuel Gas Flow Rate	
DATE/TIME	TOTAL DURATION (HRS)	CAUSE/CORRECTIVE ACTION	
a) Monitor malfunction			
Total -	0.00	<u>-</u>	
b) Non-monitor malfunction			
Total -	0.00	_	
c) QA calibration 3/27/2019 8:00			
3/27/2019 9:00 _ Total	1.00	_Annual meter calibration	
d) Other known causes			
Total -	0.00	_	
e) Unknown causes			
Total	0.00	_	

AQD FILE#: #0203 (AI ID 447)

POLLUTANT (circle one):	SO2 NOx	со	CO2	O2 T	RS H2S	HCL	Opacity	
	Other: Flow		-	MONITOR				
REPORTING QUARTER:	First, 2019	····	_	MODEL:	Fuel G	as Flow Ra	ate/FG H2S CEM	
FACILITY:				MFR:				
	Refining Co. LLC		_	······				
			_					
					IMIT AND AVE			
EMISSION SUBJECT ITEM:	EQUI15		-	1.60 lb SO2/hr - 3 hour rolling avg.				
				1.7	1.75 lb SO2/mmbtu - 3 hour rolling avg.			
EMISSION UNIT(S):	Dehex Reboiler Heate Heater 10-B-1	er	-	EMISSION B	A CIC.	CID for	SO2 NAAQS	
	neater 10-B-1		-	EIVIIOSION D	A313.	31P 10I	SUZ NAAUS	
ASSOCIATED ITEMS:	COMG7, COMG14, EQUII	163, EQUI1	93, EQUI19	4, STRU9				
				OPERATING	HOURS OF E	MISSION UN	IT:	
						Total	Fuel Gas	
						2160	2160	
A. EMISSION DATA SUMMA	RY	-		B CEM Perf	ormance Sum			
	CESS EMISSIONS (HRS)				RATION OF CE		AE DURING	
1		lb/hr	ib/mmbtu	sou	SOURCE OPERATION (HRS)			
a) Startup/Shutdowr	1	0.00	0.00		Fuel Gas		Fuel Gas	
b) Control equipmer	nt	0.00	0.00	a) M	a) Monitor malfunction 0.00		0.00	
c) Process problems	5	0.00	0.00	b) N	b) Non-monitor malfunction 0.00		0.00	
d) Other known caus	ses	0.00	0.00	c) QA calibration 0.00			0.00	
e) Unknown causes		0.00	0.00	d) Other known causes 0.00			0.00	
f) Soot blowing		0.00	0.00	e) Unknown causes 0.00			0.00	
g) Fuel problems	0.00	0.00						
2 TOTAL DURATION	(HRS)	0.00	0.00	2 ТОТ	TAL DURATION	N (HRS)	0.00	
3 PERCENT OF TOT	AL			3 PERCENT OF TOTAL				
EXCESS EMISSION	S	0.00%	0.00%	CEN	I DOWNTIME		0.00%	
	FOR OPACITY, RECORD	ALL TIMES IN	MINUTES. F	OR GASES, F	RECORD ALL T	rimes in hou	URS.	
								
% Total Excess Emissions =	Total Duratio	n of Excess I	Emissions / (To	otal Operating	Time - CEM D	owntime)		
NOTES: There was zero	fuel oil runtime dur:	ing the qu	arter.			_		
 						_		
					· · · · · · · · · · · · · · · · · · ·			
						_		
If no exceedances: I certify th	at the required analyses were	made that I	am familiar wi	ith the results	and that to the	best of my kn	nowledge there were no	
							nowledge their ewere no	
•	Son cortification na			•		DATE		

REPORTING QUARTER:	First, 2019	AQD FILE#: #0203 (AI ID 447)
EMISSION UNIT(S):	Heater 10-B-1	<u>-</u>
POLLUTANT MONITORED:	SO2 lb/hr	
TOTAL		
DURATION DATE/TIME (HRS)	MAX. CONCENTRATION CAUSE/CORRECTIVE ACTION	
a) Startup/Shutdown		
1/1/2019		
4/1/2019	No excess emissions.	
Total 0.00		
b) Control equipment		
1/1/2019		
4/1/2019	No excess emissions.	
Total 0.00	_	
a) Passasa anahlana		
c) Process problems 1/1/2019		
4/1/2019 4/1/2019	No excess emissions.	
Total 0.00		
10101		
d) Other known causes		
1/1/2019		
4/1/2019	No excess emissions.	
Total 0.00		
e) Unknown causes		
1/1/2019		
4/1/2019	No excess emissions.	
Total 0.00	_	
f) Soot blowing		
1/1/2019		
4/1/2019	No excess emissions.	
Total 0.00	_ NO excess emissions.	
ev Cool machines		
g) Fuel problems		
1/1/2019 4/1/2019	No excess emissions.	
Total 0.00		

EMISSION UNIT(S): Heater 10-B-1 POLLUTANT MONITORED: SO2 1b/mmbtu	
BOLLHTANT MONITORED: SO2 Lb/mmbts	
FOLLOTARY MORE ONLD.	
TOTAL	
DURATION	
DATE/TIME (HRS) MAX. CONCENTRATION CAUSE/CORRECTIVE ACTION	
) Ou drive (Charles and	
a) Startup/Shutdown	
1/1/2019	
4/1/2019 No excess emissions. Total 0.00	
Total 0.00	
b) Control equipment	
1/1/2019	
4/1/2019 No excess emissions.	
Total 0.00	
c) Process problems	
1/1/2019	
4/1/2019 No excess emissions.	
Total 0.00	
al) Other known equaes	
d) Other known causes 1/1/2019	
4/1/2019 No excess emissions.	
Total 0.00	
Total C.oc	
e) Unknown causes	
1/1/2019	
4/1/2019 No excess emissions.	
Total 0.00	
f) Soot blowing	
1/1/2019	
4/1/2019No excess emissions. Total 0.00	
rotar 0.00	
q) Fuel problems	
1/1/2019	
4/1/2019 No excess emissions.	
Total 0.00	

REPORTING QUARTER:		First, 2019	AQD FILE #: #0203 (AI ID 447)
EMISSION UNIT(S):		Heater 10-B-1	
POLLUTANT MONITORED:		Fuel Gas Flow Rate	
DATE/TIME	TOTAL DURATION (HRS)	CAUSE/CORRECTIVE ACTION	
a) Monitor malfunction			
Total	0.00	-	
b) Non-monitor malfunction			
Total	0.00	-	
c) QA calibration			
Total	0.00	-	
d) Other known causes			
Total	0.00	-	
e) Unknown causes			
Total	0.00	-	

AQD FILE #: #0203 (AI ID 447)

POLLUTANT (circle one):	SO2	NOx	co	CO2 (O2 TRS	H2S	HCL	Opacity	
	Other:	SO2 als	o a surrog	ate fo	or MACT Subpa	art UUU H	IAP Emission	s_	
REPORTING QUARTER:	First, 20	19		ı			MONITOR	Advance Limas 1	1 SO2
5. OU ITO							MODEL:	Magnos 106 - 02	
FACILITY: St. Paul Park Re	fining Co						MFR:	* D D	
St. Paul Park Re	rining co.	PDC-					WIFK.	ABB	-
EMISSION SUBJECT ITEM:	EQUI00000	00016					EMISSION L	IMIT AND AVERAGE	
								250 ppm SO2 - 1	.2 hour rolling average
EMISSION UNIT(S):	#2 SRU/SCO	T unit							
				'			EMISSION B	BASIS:	
							40 CFR 60 I	NSPS Subpart J	
ASSOCIATED ITEMS:	TREA12, CO	MG8, EQU	I166, EQUI	167, 5	STRU81		40 CFR 63.	1568 Table 29 Opt :	la MACT Subpart UUU
PROCESS UNIT DESCRIPTION	NAI-		01	a. 1 c			m-/1 a m		
PROCESS UNIT DESCRIPTIO	ЛN.				Recovery Uni			s designed to proce	ess 50 LTPD.
				C11C D	no memerate	r. me b	arrar and r	deprend to proce	So Milb.
					TOTAL	OPERATIN	NG HOURS		
					OF EMI	ISSION UN	IT:	2014	
A EMICCION DATA CUMMAN				 -1	D. CEM DEDEC	DMANOF	Cultura a DV		To any nynaso wcomaatiou
A. EMISSION DATA SUMMAR					B. CEM PERFO	RMANCE	SUMMARY		C. SRU BYPASS INFORMATION
1 DURATION OF EXCE	SS EMISSION	S (HRS)			1 DURAT	ION OF CE	M DOWNTIME	DURING	1 DURATION OF BYPASS
a) Startup/Shutdown		,	0.00		SOURCE OPERATION (HRS)				a) Process Problems 0.00
b) Control equipment			0.00		a) Moni	tor malfunc	tion	0.00	b) Other known causes 0.00
c) Process problems			0.00		b) Non-	monitor ma	lfunction	0.00	c) Unknown causes 0.00
d) Other known cause	s	_	0.00		c) QA c	alibration		0.00	
e) Unknown causes			0.00		d) Other	r known ca	uses	27.00	2 TOTAL DURATION (HRS)0.00_
f) Soot blowing		_	0.00	ļ	e) Unknown causes 0.00			0.00	3 PERCENT OF TOTAL
g) Fuel problems			0.00						OPERATION HOURS 0.00%
2 TOTAL DURATION (F	rs)	_	0.00		2 TOTAL	DURATION	N (HRS)	27.00	
3 PERCENT OF TOTAL	_				3 PERCE	NT OF TO	TAL		
EXCESS EMISSIONS	;	_	0.00%	- 1	CEM D	OWNTIME		1.34%	
	FOR OPACI	ry, recor	D ALL TIMES	LI S IN MI	NUTES. FOR G	ASES, RE	CORD ALL TIM	ES IN HOURS.	
% Total Excess Emissions =		Total Dura	ation of Exces	ss Emis	sions / (Total Op	erating Tin	ne - CEM Down	time)	
% Total CEM Downtime =		CEM Dow	ntime / Total	Operat	ing Time				
NOTES: Actual monitored value	es are noted in	this section	1						
During excess emission	on events, a va	ilue equal to	1.5x the high	n calibra	ation gas concer	ıtration is u	sed to replace a	any analyzer readings o	over that value since measured
data points are not ver	rifiable or accu	rate when a	t least 50% g	reater t	han the high cali	bration gas	concentration.		
									
If no avenadances: I codify the	t the required :	nolvene	ro mada tha	t l om f	amiliar with the a	oculto ond	that to the bast	of my knowledge	
If no exceedances: I certify that there were no exceedances durknowledge the information is varieties.	ring the reporti	-				,		, ,	
SUBMITTED BY:	See certif	ication p	page at fr	ont of	report		DATE:		_

REPORTING QUARTER:		First, 2019	AQD FILE #: #0203 (AI ID 447)
EMISSION UNIT(S):		#2 SRU/SCOT unit	
POLLUTANT MONITORED:		SO2 (ppm)	
DATE/TIME	TOTAL DURATION (HRS)	MAX. CONCEN. (ppm, 12-hr average) and recalc	CAUSE/CORRECTIVE ACTION
a) Startup/Shutdown			
a) Startup/Shutdown 1/1/2019 4/1/2019		No excess emissions.	
Total	0.00	NO excess emissions.	
b) Control equipment 1/1/2019 4/1/2019		No excess emissions.	
Total	0.00	_	
c) Process problems 1/1/2019		No eveces emissions	
4/1/2019 _ Total	0.00	No excess emissions.	
d) Other known causes 1/1/2019 4/1/2019 _		No excess emissions.	
Total	0.00		
e) Unknown causes 1/1/2019 4/1/2019		No excess emissions.	
Total	0.00	-	
f) Soot blowing 1/1/2019 4/1/2019 _ Total	0.00	No excess emissions.	
g) Fuel problems 1/1/2019 4/1/2019 _ Total	0.00	No excess emissions.	

REPORTING QUARTER:		First, 2019	AQD FILE #: #0203 (AI ID 447)
EMISSION UNIT(S):		#2 SRU/SCOT unit	
POLLUTANT MONITORED:		SO2	
DATE/TIME_	TOTAL DURATION (HRS)	CAUSE/CORRECTIVE ACTION	
a) Monitor malfunction			
Total	0.00	-	
b) Non-monitor malfunction			
Total	0.00	-	
c) QA calibration			
Total	0.00	-	
d) Other known causes			
2/25/2019 6:00 2/26/2019 8:00 2/27/2019 12:00	26.00	Failed validation; cleaned plugged tubing	
2/27/2019 13:00	1.00	Preventative maintenance	
Total	27.00		
e) Unknown causes			
Total -	0.00	-	

CONTINUOUS EMISSION MONITOR SRU BYPASS INFORMATION

REPORTING QUART	ER:		First, 2019	AQD FILE #: #0203 (AI ID 447)
EMISSION UNIT(S):			#2 SRU/SCOT unit	-
POLLUTANT MONITO	ORED:		Bypass (Acid gas)	
DATE/TIME	_	TOTAL DURATION (HRS)	CAUSE/CORRECTIVE ACTION	
a) Process problems				
Total	1/1/2019 4/1/2019 _	0.00	No bypasses that resulted in excess emissions.	
b) Other known cause	s			
,	1/1/2019 4/1/2019		No bypasses that resulted in excess emissions.	
Total	_	0.00	-	
b) Unknown causes				
	1/1/2019			
	4/1/2019_		No bypasses that resulted in excess emissions.	
Total		0.00		

AQD FILE #: #0203 (AI ID 447)

POLLUTANT (circle one):	(SO2)	NOx	co c	CO2 O2 TF	RS H2S HCL	Opacity
	Other:					
	-			MONITOR	Advance Limas 1	11 802
REPORTING QUARTER:	First, 2019			MODEL:	Magnos 106 - 02	2
FACILITY:				MFR: ABB		
	Refining Co. LLC					
				EMISSION LIM	IIT AND AVERAGE TIME	:
EMISSION SUBJECT ITEM			lb SO2/hr - 1 hour			
EMICCION LINIT/C)	#2 SRU/SCOT unit			15.0	lb SO2/hr - 3 hour	rolling average
EMISSION UNIT(S):	#2 SRO/SCOT UNIC			EMISSION BASIS: MN Rule 7009.0020 - AAQS/SIP		
				EMISSION BA	313. MN Rule 7009.00	120 - MAQS/SIP
ASSOCIATED ITEMS:	TREA12, COMG8, EQUI	166, EQUI167, STRU14				
				TOTAL OPERA	ATING HOURS	
				OF EMISSION	UNIT: 2014	<u>L</u>
(T.:						
A. EMISSION DATA SUMM		· · · · · · · · · · · · · · · · · · ·		B. CEM PERFO	ORMANCE SUMMARY	
I DURATION OF EX	CESS EMISSIONS (HRS)	1 hr	3 hr	1 DUR	ATION OF CEM DOWNT	IME DURING
a) Startup/Shutdown	n	0.00	0.00		RCE OPERATION (HRS)	=
b) Control equipmer		0.00	0.00	1	a) Monitor malfunction 0.00 b) Non-monitor malfunction 0.00	
c) Process problem	s	0.00	0.00			
d) Other known cau	ses	0.00	0.00	c) QA	calibration	0.00
e) Unknown causes		0.00	0.00	d) Ott	her known causes	27.00
f) Soot blowing		0.00	0.00	e) Un		0.00
g) Fuel problems		0.00	0.00			
2 TOTAL DURATION	• • ——	0.00	0.00	1	AL DURATION (HRS)	27.00
3 PERCENT OF TOT		0.000			CENT OF TOTAL	
EXCESS EMISSION	NS	0.00%	0.00%	_ CEM DOWNTIME		1.34%
	FOR OPACITY, RECORL	DALL TIMES IN MINUTES. FO	R GASES, RECOF	RD ALL TIMES IN F	HOURS.	
W.T. I. I. E	TAID OF OUR	. F				
% Total Excess Emissions =	F Total Duration of Excess	s Emissions / (Total Operating T	ime - CEM Downtin	me)		
% Total CEM Downtime =	CEM	1 Downtime / Total Operating Ti	me			
						
NOTE:						
lb/hr SO2 CEM d	lowntime same as repor	ted for #2 SRU/SCOT (E	J 019) SO2 ppm		·	
						
		ere made, that I am familiar with				exceedances during the
		nation in this report and that to t	THE DEST OF MY KNOW	vieuge the intormation		
SUBMITTED BY:	See certification p	age at front of report		DATE:		

REPORTING QUARTER:		Pirst, 2019	AQD FILE #: #0203 (AI ID 447)
EMISSION UNIT(S):		#2 SRU/SCOT unit	
POLLUTANT MONITORED:		S02 (lbs/hr)	
DATE/TIME	TOTAL DURATION (HRS)	MAX. CONCEN. (lbs/hr, 1-hr average) and ppm reca	IC CAUSE/CORRECTIVE ACTION
a) Startup/Shutdown 1/1/2019 4/1/2019 _ Total	0.00	No excess emissions.	
b) Control equipment 1/1/2019 4/1/2019 _ Total	0.00	No excess emissions.	
c) Process problems 1/1/2019 4/1/2019 Total	0.00	No excess emissions.	
d) Other known causes 1/1/2019 4/1/2019 _ Total	0,00	No excess emissions.	
e) Unknown causes 1/1/2019 4/1/2019 _ Total	0.00	No excess emissions.	
f) Soot blowing 1/1/2019 4/1/2019 Total	0.00	No excess emissions.	
g) Fuel problems 1/1/2019 4/1/2019 _ Total	0.00	No excess emissions.	

EXCESS EMISSION REPORT

REPORTING QUARTER:		First, 2019	AQD FILE#: #0203 (AI ID 447)
EMISSION UNIT(S):		#2 SRU/SCOT unit	
POLLUTANT MONITORED:		502 (lbs/hr)	
DATE/TIME	TOTAL DURATION (HRS)	MAX. CONCEN. (lbs/hr, 3-hr average)	CAUSE/CORRECTIVE ACTION
a) Startup/Shutdown 1/1/2019 4/1/2019 _ Total	0.00	No excess emissions.	
b) Control equipment 1/1/2019 4/1/2019 _ Total	0.00	No excess emissions.	
c) Process problems 1/1/2019 4/1/2019 _ Total	0.00	No excess emissions.	
d) Other known causes 1/1/2019 4/1/2019 _ Total	0.00	_ No excess emissions.	
e) Unknown causes 1/1/2019 4/1/2019 _ Total	0.00	No excess emissions.	
f) Soot blowing 1/1/2019 4/1/2019 _ Total	0.00	No excess emissions.	
g) Fuel problems 1/1/2019 4/1/2019 _ Total	0.00	_ No excess emissions.	

REPORTING QUARTER:		First, 2019	AQD FILE #: #0203 (AI ID 447)
EMISSION UNIT(S):		#2 SRU/SCOT unit	
POLLUTANT MONITORED:		SO2 (lbs/hr)	
DATE/TIME	TOTAL DURATION (HRS)	CAUSE/CORRECTIVE ACTION	
	SO2 lb/hr dox	wntime same as reported for #2 SRU/SCOT	(EU 019) SO2 ppm
a) Monitor malfunction			
Total	0.00	See #2 SCOT ppm page for details	
b) Non-monitor malfunction			
Total	0.00	See #2 SCOT ppm page for details	
c) QA calibration			
Total	0.00	See #2 SCOT ppm page for details	
d) Other known causes			
Total	27.00	See #2 SCOT ppm page for details	
e) Unknown causes			
Total	0.00	See #2-SCOT ppm page for details	

AQD FILE#: #0203 (AI ID 447)

POLLUTANT (circle one):	SO2	NOx	co c	02 02 TRS	H2S HCL	_ Opacity
	Other:	flow		MONITOR		
REPORTING QUARTER:	First, 2019				Fuel Gas Flow	Rate/FG H2S CEM
FACILITY:				MFR:		
St. Paul Park I	Refining Co. L	ЬĊ		-		

EMPONON OUR LEGE ITEM				EMISSION LIMITS		
EMISSION SUBJECT ITEM:	EQUI17					our rolling average
EMISSION UNIT(S):	Guard Case R	eactor Hea	ter	<u>1./5 lb</u>	SOZ/MINDLU - 3	hour rolling avg.
<u> </u>	36-B-1			EMISSION BASIS:	SIP fo	or SO2 NAAQS
ASSOCIATED ITEMS:	COMG9, COMG7	, EQUI163,	EQUI199, STR	U62		
				TOTAL OPERATIN	C HUIJBS	
				OF EMISSION UNIT		5
A. EMISSION DATA SUMMA				B. CEM PERFORM	IANCE SUMMARY	,
1 DURATION OF EXC		HRS)				
		lb/hr	lb/mmbtu	1 DURATION	N OF CEM DOWN	TIME DURING
a) Startup/Shutdown	1	0.00	0.00	SOURCE	OPERATION (HRS	;)
b) Control equipmen	nt	0.00	0.00	a) Monitor	malfunction	0.00
c) Process problems	5	0.00	0.00	b) Non-moi	nitor malfunction	0.00
d) Other known caus	ses	0.00	0.00	c) QA calib	oration	0.00
e) Unknown causes		0.00	0.00	d) Other kn	nown causes	0.00
f) Soot blowing		0.00	0.00	e) Unknowi	n causes	0.00
g) Fuel problems		0.00	0.00			
2 TOTAL DURATION	. ,	0.00	0.00	1	JRATION (HRS)	0.00
3 PERCENT OF TOTA				3 PERCENT		
EXCESS EMISSION	S	0.00%	0.00%	CEM DOW	NTIME	0.00%
	FOR OPACITY, F	RECORD ALL	TIMES IN MINUTE	ES. FOR GASES, RECO	ORD ALL TIMES IN	HOURS.
% Total Excess Emissions =		Total Durati	on of Excess Emis	ssions / (Total Operating	Time - CEM Dowr	ntime)
% Total CEM Downtime =		CEM Downt	ime / Total Operat	ing Time		
NOTES:						
	41.0			···		
<u> </u>			<u>,=</u>			
If no exceedances: I certify th	at the required anal	yses were ma	de, that I am famil	iar with the results, and t	that to the best of r	nv knowledge there were no
						my knowledge the information is valid.
SUBMITTED BY:	See certifica	ation page	at front of	report	DATE:	

REPORTING QUARTER:		First, 2019	AQDFILE#: #0203 (AI ID 447)
EMISSION UNIT(S):		36-B-1	
POLLUTANT MONITORED:		S02 - 1b/hr	
DATE/TIME	TOTAL DURATION (HRS)	MAX. CONCENTRATION	CAUSE/CORRECTIVE ACTION
a) Startup/Shutdown			
1/1/2019			
4/1/2019		_No excess emissions.	
Total	0.00		
b) Control equipment 1/1/2019 4/1/2019		No excess emissions.	
Total	0.00	_,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
c) Process problems 1/1/2019 4/1/2019		No excess emissions.	
Total	0.00		
d) Other known causes 1/1/2019 4/1/2019		_No excess emissions.	
Total	0.00		
e) Unknown causes 1/1/2019 4/1/2019		No excess emissions.	
Total	0.00	_140 0,0000 011110010110.	
f) Soot blowing 1/1/2019 4/1/2019 Total	0.00	_No excess emissions.	
g) Fuel problems			
9) 1 del problems 1/1/2019 4/1/2019		No excess emissions.	
Total	0.00	-	

REPORTING QUARTER:		First, 2019	AQDFILE# #0203 (AI ID 447)
EMISSION UNIT(S):		36-B-1	
POLLUTANT MONITORED:		S02 - lb/mmbtu	
DATECTURE	TOTAL DURATION	MAY CONSENTENTION	
DATE/TIME	(HRS)	MAX. CONCENTRATION	CAUSE/CORRECTIVE ACTION
a) Startup/Shutdown 1/1/2019 4/1/2019		No excess emissions.	
Total	0.00	_	
b) Control equipment 1/1/2019 4/1/2019		No excess emissions.	
Total —	0.00	_	
c) Process problems 1/1/2019 4/1/2019 Total	0.00	_No excess emissions.	
rotar	0.00		
d) Other known causes 1/1/2019 4/1/2019 Total	0.00	_No excess emissions.	
Total	0.00		
e) Unknown causes 1/1/2019 4/1/2019		No excess emissions.	
Total	0.00		
f) Soot blowing 1/1/2019 4/1/2019 Total	0.00	_No excess emissions.	
g) Fuel problems 1/1/2019 4/1/2019		_No excess emissions.	
Total	0.00		

REPORTING QUARTER:		First, 2019	AQD FILE#: #0203 (AI ID 447)
EMISSION UNIT(S):		36-B-1 Fuel Gas Flow Rate	
POLLUTANT MONITORED:		S02	
DATE/TIME	TOTAL DURATION (HRS)	CAUSE/CORRECTIVE ACTION	
a) Monitor malfunction			
Total	0.00	_	
b) Non-monitor malfunction			
Total	0.00	_	
c) QA calibration			
Total	0.00	_	
d) Other known causes			
Total	0.00	_	
e) Unknown causes			
Total .	0.00		

AQDFILE#: #0203 (AI ID 447)

POLLUTANT (circle one):	SO2	NOx	CO	CO2	02	TRS	H2S	HCL	Opacity
	Other:	Flow	<u>-</u>						
DEDODTING OUADTED					ONITO				. (====================================
REPORTING QUARTER:	First, 2019			. 1010	ODEL:		Fuel Gas	Flow Ra	te/FG H2S CEM
FACILITY:				M	FR:				
St. Paul Park I	Refining Co. LI	ıC							
									
ENGOLON OUR LEGT ITEM				EN			AND AVER		
EMISSION SUBJECT ITEM:	EQUI19			-					rolling avg. our rolling avg.
EMISSION UNIT(S):	Reactor Charg	re Heater			•	1./5 10	502/1111101	<u>. u - 3 110</u>	our rolling avg.
	36-B-6E			EN	MISSIC	N BASIS:	: _5	SIP for S	SO2 NAAQS
				•			_		
ASSOCIATED ITEMS:	COMG9, COMG7,	EQUI163,	EQUI201, S	TRU80					
				т/	TAL .	ODEDATE	NO HOURS		
						SSION UN	NG HOURS	1987	
				0.	LIVIL	01014 014	-	1701	-
A. EMISSION DATA SUMMA	RY			В.	CEM	PERFORI	MANCE SUI	MMARY	
1 DURATION OF EXC	ESS EMISSIONS (I	HRS)							
		lb/hr	lb/mmbtu		1	DURATIO	N OF CEM	DOWNTIM	E DURING
a) Startup/Shutdown		0.00	0.00				OPERATIO		
b) Control equipmen		0.00	0.00			•	r malfunctior		0.00
c) Process problems		0.00	0.00	.		•	onitor malfur	nction	0.00
d) Other known caus	ses	0.00	0.00	.]		c) QA cali			1.00
e) Unknown causes		0.00	0.00	. j		•	nown cause	es	0.00
f) Soot blowing		0.00	0.00	. }		e) Unknov	wn causes		0.00
g) Fuel problems	(LIDC)	0.00	0.00		_	TOTAL D	LIDATION (UDC)	
2 TOTAL DURATION		0.00	0.00	.			URATION (,	1.00
3 PERCENT OF TOTAL		0.004	0.008				T OF TOTAL	L	0.050
EXCESS EMISSION	5	0.00%	0.00%	.		CEM DO	/VIN I IIVIE		0.05%
	FOR OPACITY, R	ECORD ALL	TIMES IN MINU	JTES. FO	OR GA	SES, REC	CORD ALL T	TIMES IN HO	DURS.
% Total Excess Emissions =		Total Duration	on of Excess Er	missions /	′ (Tota	l Operatin	g Time - CE	M Downtime	e)
% Total CEM Downtime =		CEM Downt	me / Total Ope	rating Tin	ne				
NOTES:									
If no exceedances: I certify the exceedances during the report									nowledge there were no nowledge the information is valid.
SUBMITTED BY:	See certifica	tion page	at front o	f repor	t		_ (DATE:	

REPORTING QUARTER:		First, 2019	AQDFILE#: #0203 (AI ID 447)
EMISSION UNIT(S):		36-B-6E	
POLLUTANT MONITORED:		S02 - 1b/hr	
	TOTAL DURATION		
DATE/TIME	(HRS)	MAX. CONCENTRATION (CAUSE/CORRECTIVE ACTION
a) Startup/Shutdown 1/1/2019 4/1/2019		No excess emissions.	
Total	0.00		
b) Control equipment 1/1/2019 4/1/2019		No excess emissions.	
Total	0.00	_	
c) Process problems 1/1/2019 4/1/2019 _ Total	0.00	No excess emissions.	
d) Other known causes 1/1/2019 4/1/2019		_ No excess emissions.	
Total	0.00		
e) Unknown causes 1/1/2019 4/1/2019 _ Total	0.00	No excess emissions.	
f) Soot blowing 1/1/2019 4/1/2019 _ Total	0.00	_ No excess emissions.	
TOtal	0.00		
g) Fuel problems 1/1/2019 4/1/2019		_No excess emissions.	
Total	0.00		

REPORTING QUARTER:		First, 2019 AQD FILE#: #0203 (AI ID 447)				
EMISSION UNIT(S):		36-B-6E				
POLLUTANT MONITORED:		S02 - lb/mmbtu				
	TOTAL DURATION					
DATE/TIME	(HRS)	MAX. CONCENTRATION	CAUSE/CORRECTIVE ACTION			
a) Startup/Shutdown 1/1/2019						
4/1/2019		No excess emissions.				
Total	0.00	-				
b) Control equipment 1/1/2019 4/1/2019		No excess emissions.				
Total	0.00					
c) Process problems 1/1/2019 4/1/2019		No excess emissions.				
Total	0.00	-				
d) Other known causes 1/1/2019 4/1/2019		No excess emissions.				
Total	0.00	_				
e) Unknown causes 1/1/2019						
4/1/2019 _		No excess emissions.				
Total	0.00	_				
f) Soot blowing 1/1/2019						
4/1/2019 _ Total	0.00	_No excess emissions.				
g) Fuel problems 1/1/2019		No constant				
4/1/2019 _ Total	0.00	_No excess emissions.				
rotar	0.00					

REPORTING QUARTER:		First, 2019	AQD FILE #: #0203 (AI ID 447)
EMISSION UNIT(S):		3-B-6E Fuel Gas Flow Rate	
POLLUTANT MONITORED:		S02	
DATE/TIME	TOTAL DURATION (HRS)	CAUSE/CORRECTIVE ACTION	
a) Monitor malfunction			
Tota! -	0.00	_	
b) Non-monitor malfunction			
Total -	0.00	_	
c) QA calibration 2/13/2019 13:00			
2/13/2019 14:00 _ Total	1.00	Annual meter calibration	
d) Other known causes			
Total –	0.00	_	
e) Unknown causes			
Total -	0.00	_	

AQD FILE #: #0203 (AI ID 447)

POLLUTANT (circle one):	SO2	NOx	CO	CO2	O2	TRS	H2S	HCL	Opacity	
	Other:	Flow		_						
					MONIT	OR				
REPORTING QUARTER:	First, 2019			-	MODEL	.:	Fuel Gas	Flow Ra	te/FG H2S CEM	
FACILITY:					MFR:					
St. Paul Park R	efining Co L	r.C			IVII IX.	·				
be. radi raza i				•						
				-	EMISSI	ON LIMIT	S AND AVE	RAGING TI	ΛE:	
EMISSION SUBJECT ITEM:	EQUI18					2.10 lk	o S02/hr -	- 3 hour	rolling average	
						1.75 1	sO2/mmbt	u - 3 ho	ur rolling avg.	
EMISSION UNIT(S):	Reactor Char	ge Heater		_						
	36-B-2,3,4			-	EMISSI	ON BASIS	S: _	SIP for S	SO2 NAAQS	
ASSOCIATED ITEMS:	COMCO COMCO	POUT 163	EOUTOOO	CERTITAL 1						
ASSOCIATED ITEMS.	COMG9, COMG7	, EQUITES,	, EQUIZOU,	SIRUL						
					TOTAL	OPERAT	ING HOURS	3		
					OF EMI	SSION U	NIT:	1986	_	
							_			
A. EMISSION DATA SUMMA		(1100)			B. CEM	PERFOR	RMANCE SU	IMMARY		
1 DURATION OF EXC	ESS EMISSIONS	• ,	11. 6			DUDATE	0N 0E 0EM	DOMESTIN	IE DUDING	
-> Ot		lb/hr	lb/mmbtu		1		ON OF CEM		IE DURING	
a) Startup/Shutdown		0.00	0.00	-			E OPERATIO	, ,	0.00	
b) Control equipmen c) Process problems		0.00	0.00	-			or malfunction		0.00	
d) Other known caus		0.00	0.00	-	b) Non-monitor malfunction 0.00 c) QA calibration 0.00					
e) Unknown causes	565	0.00	0.00	-	,		known cause	20	0.00	
f) Soot blowing		0.00 0.00				,	own causes	55	0.00	
g) Fuel problems		0.00	0.00	-						
2 TOTAL DURATION	(HRS)	0.00	0.00	-	2	TOTAL	DURATION (HRS)	0.00	
3 PERCENT OF TOTA			0.00	-	ĺ		NT OF TOTA	,		
EXCESS EMISSION		0.00%	0.00%				WNTIME		0.00%	
				-						
	FOR OPACITY,	RECORD AL	L TIMES IN M	INUTES	S. FOR	GASES, F	RECORD AL	L TIMES IN	HOURS.	
% Total Excess Emissions =		Total Duration	on of Excess E	mission	ns / (Tota	al Operatir	ng Time - CE	M Downtim	e)	
% Total CEM Downtime =		CEM Downt	ime / Total Ope	erating	Time					
NOTES:				·						
NOTES.										
 		**					_			
		•			****					
	·									
If no exceedances: I certify the exceedances during the report valid.	•	•							y knowledge there were no y knowledge the information is	
SUBMITTED BY:	See certific	ation page	at front	of rep	port			DATE:		

REPORTING QUARTER:		First, 2019	AQD FILE #	#0203 (AI ID 447)
EMISSION UNIT(S):		36-B-2,3,4		•
POLLUTANT MONITORED:		S02 - lb/hr		
DATE/TIME	TOTAL DURATION (HRS)	MAX. CONCENTRATION	CAUSE/CORRECTIVE ACTION	
a) Startup/Shutdown 1/1/2019 4/1/2019 _ Total	0.00	_No excess emissions.		
b) Control equipment 1/1/2019 4/1/2019 _	0.00	_No excess emissions.		
Total c) Process problems 1/1/2019 4/1/2019 _ Total	0.00	_ No excess emissions.		
d) Other known causes 1/1/2019 4/1/2019 _ Total	0.00	No excess emissions.		
e) Unknown causes 1/1/2019 4/1/2019 _ Total	0.00	_No excess emissions.		
f) Soot blowing 1/1/2019 4/1/2019 _ Total	0.00	_No excess emissions.		
g) Fuel problems 1/1/2019 4/1/2019 _ Total	0.00	_No excess emissions.		

REPORTING QUARTER:		First, 2019	AQD FILE #:	: #0203 (AI ID 447)	
EMISSION UNIT(S):		36-B-2,3,4		_	
POLLUTANT MONITORED:		S02 - lb/mmbtu			
	TOTAL DURATION				
DATE/TIME	(HRS)	MAX. CONCENTRATION	CAUSE/CORRECTIVE ACTION		_
a) Startup/Shutdown 1/1/2019 4/1/2019		No excess emissions.			
Total	0.00	_			
b) Control equipment 1/1/2019 4/1/2019		No excess emissions.			
Total	0.00	_			
c) Process problems 1/1/2019 4/1/2019 _ Total	0.00	_No excess emissions.			
d) Other known causes 1/1/2019 4/1/2019		No excess emissions.			
Total	0.00				
e) Unknown causes 1/1/2019 4/1/2019 _	0.00	_ No excess emissions.			
Total	0.00				
f) Soot blowing 1/1/2019 4/1/2019 _ Total	0.00	_No excess emissions.			
rotai	0.00				
g) Fuel problems 1/1/2019 4/1/2019 _		_ No excess emissions.			
Total	0.00				

REPORTING QUARTER:		First, 2019	AQD FILE #: #0203 (AI ID 447)
EMISSION UNIT(S):		36-B-2,3,4 Fuel Gas Flow Rate	
POLLUTANT MONITORED:		S02	
DATE/TIME	TOTAL DURATION (HRS)	CAUSE/CORRECTIVE ACTION	
DATERNINE	(111(0)	CAUSE/CORRECTIVE ACTION	
a) Monitor malfunction			
Tatal	0.00	_	
Total	0.00		
b) Non-monitor malfunction			
Total	0.00	_	
c) QA calibration			
Total	0.00		
d) Other known causes			
Total	0.00	_	
e) Unknown causes			

Total

0.00

AQD FILE #: #0203 (AI ID 447)

POLLUTANT (circle one):	SO2	NOx	СО	CO2	O2	TRS	H2S	HCL	Opacity	
	Other:	Flow				_				
REPORTING QUARTER:	First 2019				MONITO	R	Fuel Cae	Elow Bat	o/EC HOS CEM	
KEFORTING QUARTER.	First, 2019				WODEL.		Fuel Gas	FIOW Rat	e/FG H2S CEM	
FACILITY:					MFR:					
St. Paul Park R	efining Co. LLC									
					51 110 010		0 AND AVE		_	
EMISSION SUBJECT ITEM:	EQUI20						S AND AVER		E: colling average	
EMISSION SOBSECT TEM.	EQUIZO				_				r rolling average	
EMISSION UNIT(S):	Reactor Charge	Heaters			_		,		<u> </u>	
	36-B-6W				EMISSIO	N BASIS	S: _	SIP for S	O2 NAAQS	
ASSOCIATED ITEMS:	GOMGO GOMGO	DOUT CO. D.	WITOOD GED	17.0						
ASSOCIATED ITEMS.	COMG9, COMG7,	EQUITOS, E	(UIZUZ, SIR	119	_					
					TOTAL C	PERAT	ING HOURS			
					OF EMIS	SION UI	NIT:	1988	_	
A. EMISSION DATA SUMMA	RY				B CEM F	PERFOR	MANCE SUI	MMARY		
1 DURATION OF EXC		RS)			D. GEMI	LIM OI		iviivio st C I		
	•	!b/hr	lb/mmbtu		1 0	DURATE	ON OF CEM	DOWNTIME	E DURING	
a) Startup/Shutdown		0.00	0.00		8	SOURC	E OPERATIO	N (HRS)		
b) Control equipment	t	0.00	0.00		a	a) Monito	or malfunction	1	0.00	
c) Process problems		0.00	0.00		b) Non-monitor malfunction0.00_					
d) Other known caus	es	0.00	0.00			c) QA ca	libration		2.00	
e) Unknown causes		0.00	0.00		d) Other known causes0.00					
f) Soot blowing		· · · · · · · · · · · · · · · · · · ·						0.00		
g) Fuel problems		0.00	0.00							
2 TOTAL DURATION (•	0.00	0.00				DURATION (,	2.00	
3 PERCENT OF TOTA							NT OF TOTAL	L		
EXCESS EMISSION	S	0.00%	0.00%			CEM DC	WNTIME		0.10%	
	FOR OPACITY, RE	CORD ALL T	MES IN MINUT	ES. I	FOR GASE	S, REC	ORD ALL TI	MES IN HOL	JRS.	
% Total Excess Emissions =		Total Duration	of Excess Em	ission	ıs / (Total C	Operating	g Time - CEM	1 Downtime)		
% Total CEM Downtime =		CEM Downtin	ne / Total Oper	ating ⁻	Time					
NOTES:										
If no exceedances: I certify that	at the required analysis	as woro mado	that I am famili	or with	h tha racult	e and th	ant to the bee	t of my know	yladaa thara wara na	
exceedances during the report valid.										
SUBMITTED BY:	See certificat	ion page at	front of	epor	t		_	DATE:		

REPORTING QUARTER:		First, 2019	AC	D FILE #: #0203	(AI ID 447)
EMISSION UNIT(S):		36-B-6W			
POLLUTANT MONITORED:		S02 - lb/hr			
DATE/TIME	TOTAL DURATION (HRS)	MAX. CONCENTRATION	CAUSE/CORRECTIVE ACT	ION	
a) Startup/Shutdown 1/1/2019 4/1/2019 _		No excess emissions.			
Total	0.00				
b) Control equipment 1/1/2019 4/1/2019 _ Total	0.00	No excess emissions.			
i otal	0.00				
c) Process problems 1/1/2019 4/1/2019 _		No excess emissions.			
Total	0.00				
d) Other known causes 1/1/2019 4/1/2019		No excess emissions.			
Total	0.00	•			
e) Unknown causes 1/1/2019 4/1/2019		No excess emissions.			
Total _	0.00	•			
f) Soot blowing 1/1/2019 4/1/2019 _		No excess emissions.			
Total	0.00				
g) Fuel problems 1/1/2019 4/1/2019		No excess emissions.			
4/1/2019 _ Total	0.00	NO EXCESS EMISSIONS.			

REPORTING QUARTER:		First, 2019	AQD FILE # #0203 (AI ID 447)
EMISSION UNIT(S):		36-B-6W	
POLLUTANT MONITORED:		S02 - lb/mmbtu	
	TOTAL		
DATE/TIME	DURATION (HRS)	MAX. CONCENTRATION	CAUSE/CORRECTIVE ACTION
a) Startup/Shutdown			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00	_	
b) Control equipment			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00	_140 0,0000 0,11100,0110.	
c) Process problems			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00	_140 0,00033 011110510113.	
d) Other known causes			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00	_140 0,0000 0,11100,0110.	
e) Unknown causes			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00	_110 0,0000 0,11100,0110.	
f) Soot blowing			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00	_	
g) Fuel problems			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00	•	

REPORTING QUARTER:		First, 2019	AQD FILE # #0203 (AI ID 447)
EMISSION UNIT(S):		36-B-6W Fuel Gas Flow Rate	
POLLUTANT MONITORED:		S02	
DATE/TIME	TOTAL DURATION (HRS)	CAUSE/CORRECTIVE ACTION	
a) Monitor malfunction			
Total	0.00	· •	
b) Non-monitor malfunction			
Total	0.00		
c) QA calibration 2/13/2019 9:00 2/13/2019 11:00 Total	2.00	Annual meter calibration.	
d) Other known causes			
Total	0.00		
e) Unknown causes			
Total -	0.00		

AQD FILE#: #0203 (AI ID 447)

POLLUTANT (circle one):	SO2	NOx	co	CO2	O2	TRS	H2S	HCL	Opacity	
	Other:	Flow								
				-	MONITO	OR				
REPORTING QUARTER:	First, 20	19		-	MODEL	:	Fuel Gas	Flow Rat	e/FG H2S CEM	
FACILITY:					MFR:					
St. Paul Park F	Refining Co	. LLC								
				_						
					EMISSI	ON LIMIT	S AND AVER	AGING TIME	≣:	
EMISSION SUBJECT ITEM:	EQUI21			_		1.38 1	o SO2/hr -	3 hour 1	rolling avg.	
						1.75 1	b SO2/mmbt	u - 3 hou	ır rolling avg.	
EMISSION UNIT(S):	Reactor C	harge Heat	er	-	FARCOI	ON DACIO	٠			
	37-B-1			-	EMISSIC	ON BASIS). <u>S</u>	SIP for SO	DZ NAAQS	
ASSOCIATED ITEMS:	TREA20. T	REA21, COM	G7, COMG8,	EOUI	L63, E0	OUI203,	STRU89			
			· · · · · · · · · · · ·				_			
					TOTAL	OPERAT	ING HOURS			
					OF EMI	SSION UI	TIV: _	2160	_	
A. EMISSION DATA SUMMA	DV				B CEM	DEDECO	MANCE SU	MAADV		
1 DURATION OF EXC		NS (HRS)			B. CEIVI	FERFOR	INIANCE SUI	ALIANAL I		
I DOIGHTON OF EXC	LCC LIMICOIC	lb/hr	lb/mmbtu		1	DURATION	ON OF CEM	DOWNTIME	DURING	
a) Startup/Shutdown		0.00	0.00			SOURCE	OPERATIO	N (HRS)		
b) Control equipmen		0.00	0.00	-	a) Monitor malfunction 0.00					
c) Process problems	;	0.00	0.00	_		b) Non-m	nonitor malfur	nction	0.00	
d) Other known caus	es	0.00	0.00	_		c) QA ca	libration		0.00	
e) Unknown causes		0.00	0.00	- 		d) Other	known cause	s	1.00	
f) Soot blowing		0.00	0.00	_		e) Unkno	known causes		0.00	
g) Fuel problems		0.00	0.00							
2 TOTAL DURATION	(HRS)	0.00	0.00	_	2	TOTAL E	OURATION (I	HRS)	1.00	
3 PERCENT OF TOTA	AL				3	PERCEN	IT OF TOTAL	L		
EXCESS EMISSION	S	0.00%	0.00%	-		CEM DO	WNTIME		0.05%	
	FOR OPACIT	Y, RECORD	ALL TIMES IN	MINUT	ES. FO	R GASES	S, RECORD A	ALL TIMES II	N HOURS.	
							 	·		
% Total Excess Emissions =		Total Duration	on of Excess E	missio	ns / (Tota	al Operati	ng Time - CE	M Downtime	e)	
% Total CEM Downtime =		CEM Downt	ime / Total Op	erating	Time					
NOTES:										
If no exceedances: I certify th	at the required	analyses wo	a made that I	am fan	iliar with	the recul	lte and that to	n the best of	my knowledge there w	rere no
exceedances during the repor										
SUBMITTED BY:			age at fro					DATE:	,	

REPORTING QUARTER:		First, 2019	AQD I	FILE#: #0203	(AI ID 447)
EMISSION UNIT(S):		37-B-1		<u>. </u>	
POLLUTANT MONITORED:		802 - 1b/hr			
	TOTAL				
	DURATION				
DATE/TIME	(HRS)	MAX. CONCENTRATION	CAUSE/CORRECTIVE ACTIO	ON	
a) Ctartus/Chutdaws					
a) Startup/Shutdown 1/1/2019					
		No aveces emissions			
4/1/2019 _ Total	0.00	_No excess emissions.			
iotai	0.00				
b) Control equipment					
1/1/2019					
4/1/2019		No excess emissions.			
Total	0.00	_110 execus emissions.			
. 5.5.	0.00				
c) Process problems					
1/1/2019					
4/1/2019		No excess emissions.			
Total	0.00	•			
d) Other known causes					
1/1/2019					
4/1/2019		No excess emissions.			
Total	0.00				
e) Unknown causes					
1/1/2019					
4/1/2019		No excess emissions.			
Total	0.00				
f) Soot blowing					
1/1/2019					
4/1/2019		No excess emissions.			
Total	0.00	NO excess emissions.			
. 5 (4)	0.00				
g) Fuel problems					
1/1/2019					
4/1/2019		No excess emissions.			
Total	0.00				

REPORTING QUARTER:	First, 2019 AQDFILE#: #0203 (AI ID 447)	
EMISSION UNIT(S):	37-B-1	
POLLUTANT MONITORED:	SO2 - 1b/mmbtu	
TOTAL		
DURATION	N Company of the Comp	
DATE/TIME (HRS)	MAX. CONCENTRATION CAUSE/CORRECTIVE ACTION	
a) Startup/Shutdown		
1/1/2019		
4/1/2019	No excess emissions.	
Total 0.00		
b) Control equipment		
1/1/2019		
4/1/2019	_ No excess emissions.	
Total 0.00		
c) Process problems		
1/1/2019		
4/1/2019	No excess emissions.	
Total 0.00	_	
d) Other known causes		
1/1/2019		
4/1/2019	No excess emissions.	
Total 0.00	THE CACCOS CHIISSISIS.	
e) Unknown causes		
1/1/2019		
4/1/2019	No excess emissions.	
Total 0.00		
f) Soot blowing		
1/1/2019		
4/1/2019	No excess emissions.	
Total 0.00	_	
g) Fuel problems		
1/1/2019		
4/1/2019	No excess emissions.	
Total 0.00		

REPORTING QUARTER:		First, 2019	AQD FILE#	#0203	(AI	ID 447)	
EMISSION UNIT(S):		37-B-1 Fuel Gas Flow Rate		_				
POLLUTANT MONITORED:		S02						
DATE/TIME	TOTAL DURATION (HRS)	CAUSE/CORRECTIVE ACTION						
	(1110)	ONCOL CONTROL NO HON						
a) Monitor malfunction								
Total	0.00	.						
b) Non-monitor malfunction								
Total	0.00	-						
c) QA calibration								
Total	0.00	-					,	
d) Other known causes 1/1/19 10:00 1/1/19 11:00		Communications						
Total	1.00	_Communications error						
e) Unknown causes								
Total	0.00	-						

AQD FILE #: #0203 (AI ID 447)

POLLUTANT (circle one):	SO2	NOx	CO	CO2	02	TRS	H2S	HCL	Opacity
	Other:			_	MONITO	ıR			
REPORTING QUARTER:	First, 201	9		_	MODEL:		Fuel Ga	s Flow Ra	te/FG H2S CEM
FACILITY:					MFR:				
St. Paul Park F	Refining Co.	LLC_		_	-				
				-	EMISSIC	NI LIMIT	e and ave	RAGING TI	ME:
EMISSION SUBJECT ITEM:	EOUI26								rolling avg.
	~			_	-				our rolling avg.
EMISSION UNIT(S):	Product St	ripper Re	boiler	-					
	37-B-2			-	EMISSIC	N BASIS	3 :	SIP for	SO2 NAAQS
ASSOCIATED ITEMS:	TREA22, TR	EA23, COM	G7, COMG8,	EQUI16	63, EQU	1204,	STRU88		
					TOTAL (PERAT	ING HOUR	S	
					OF EMIS	SION U	NIT:	2160	
A. EMISSION DATA SUMMA	ARY				B. CEM	PERFOR	RMANCE SI	JMMARY	
1 DURATION OF EXC		IS (HRS)							
		lb/hr	lb/mmbtu		1 1	DURATI	ON OF CEN	I DOWNTIN	NE DURING
a) Startup/Shutdowr	ו .	0.00	0.00	_	;	SOURC	E OPERATI	ON (HRS)	
b) Control equipmer	nt	0.00	0.00	_	į .	a) Monito	or malfunction	on	0.00
c) Process problems	\$	0.00	0.00	_		b) Non-m	nonitor malf	unction	0.00
d) Other known caus	ses	0.00	0.00	_	(c) QA ca	libration		0.00
e) Unknown causes		0.00	0.00	_	(d) Other	known caus	ses	0.00
f) Soot blowing		0.00	0.00	_	•	e) Unkno	own causes		0.00
g) Fuel problems		0.00	0.00	_					
2 TOTAL DURATION	(HRS)	0.00	0.00	_	2	TOTAL [DURATION	(HRS)	0.00
3 PERCENT OF TOT	AL			l	3 1	PERCEN	NT OF TOTA	4L	
EXCESS EMISSION	IS .	0.00%	0.00%	-	(:	CEM DO	WNTIME		0.00%
	FOR OPACIT	Y, RECORD	ALL TIMES IN	TUNIM I	ES. FOR	R GASES	S, RECORD	ALL TIMES	S IN HOURS.
% Total Excess Emissions =		Total Durati	on of Excess E	mission	ıs / (Total	Operatir	ng Time - Cl	EM Downtim	ne)
% Total CEM Downtime =		CEM Down	time / Total Op	erating `	Time				
NOTES:									
If no exceedances: I certify the no exceedances during the reinformation is valid.									
SUBMITTED BY:	See certif:	ication p	age at fron	t of 1	report			DATE:	

REPORTING QUARTER:		First, 2019	AQDFILE #: #0203 (AI ID 447)
EMISSION UNIT(S):		37-B-2	
POLLUTANT MONITORED:		S02 - lb/hr	
	TOTAL DURATION		
DATE/TIME	(HRS)	MAX. CONCENTRATION	CAUSE/CORRECTIVE ACTION
a) Startup/Shutdown			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00		
b) Control equipment			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00		
c) Process problems			
1/1/2019			
4/1/2019		_No excess emissions.	
Total	0.00		
d) Other known causes			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00		
e) Unknown causes			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00		
f) Soot blowing			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00		
g) Fuel problems			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00		

REPORTING QUARTER:		First, 2019	AQD FIL	E#: #0203 (AI ID 447)
EMISSION UNIT(S):		37-B-2		
POLLUTANT MONITORED:		SO2 - 1b/mmbtu		
DATE/TIME	TOTAL DURATION (HRS)	MAX. CONCENTRATION	CAUSE/CORRECTIVE ACTION	1
a) Startup/Shutdown 1/1/2019 4/1/2019 Total	0.00	No excess emissions.		
b) Control equipment 1/1/2019 4/1/2019 Total	0.00	No excess emissions.		
c) Process problems 1/1/2019 4/1/2019 Total	0.00	No excess emissions.		
d) Other known causes 1/1/2019 4/1/2019 Total	0.00	_No excess emissions.		
e) Unknown causes 1/1/2019 4/1/2019 Total	0.00	_No excess emissions.		
f) Soot blowing 1/1/2019 4/1/2019 Total	0.00	No excess emissions.		
g) Fuel problems 1/1/2019 4/1/2019 Total	0.00	No excess emissions.		

REPORTING QUARTER:		First, 2019	AQD FILE #: #0203 (AI ID 447)
EMISSION UNIT(S):		37-B-2 Fuel Gas Flow Rate	
POLLUTANT MONITORED:		802	
DATE/TIME	TOTAL DURATION (HRS)	CAUSE/CORRECTIVE ACTION	
a) Monitor malfunction			
Total	0.00	-	
b) Non-monitor malfunction			
Total	0.00	_	
c) QA calibration			
Total	0.00	-	
d) Other known causes			
Total	0.00	-	
e) Unknown causes			
Total	0.00	-	

AQD FILE #: #0203 (AI ID 447)

POLLUTANT (circle one):	SO2	NOx	CO	CO2	02	TRS	H2S	HCL	Opacity	
	Other:	Flow								
					MONITO					
REPORTING QUARTER:	First, 201	9			MODEL:		Fuel Gas	Flow Rate/F	G H2S CEM	
FACILITY:					MFR:					
St. Paul Park Re	fining Co. L	rc			•					
EMISSION SUBJECT ITEM:	gowooooo	no.c no.r	1704				AND AVERA			
EMISSION SUBJECT HEM.	COM0000000	026, , EQU	3124					3 hour roll u - 3 hour r		
EMISSION UNIT(S):	Hydrogen P	lant Heate	ers			1.75 44	, boz, mibc	u 3 Hour r	olling avg.	
` ,	38-B-1, 38				EMISSI	ON BASIS	S :	SIP for SO2	NAAQS	_
ASSOCIATED ITEMS:	TREA16. TR	RA11. EOUT	24, EQUI163	B. EOUT20	8. EOUT2	05. BOU	II162. STRI	187		
7.0000	111111111111111111111111111111111111111			7			<u> </u>		_	
					OPERA	TING HOU	JRS OF EMI	SSION UNIT:		
								Total 2160	Nat Gas 2160	PSA Gas 2160
								2100	2100	2100
A. EMISSION DATA SUMMAR	RY				B. CEM	Performa	ance Summa	ary		
DURATION OF EXCE	SS EMISSIONS	(HRS)			1			DOWNTIME DU	RING	
1			lb/mmbtu	lb/hr		SOURCE	OPERATIO	N (HRS)		
a) Startup/Shutdown			0.00	0.00	4				Nat Gas	PSA Gas
b) Control equipment			0.00	0.00	-	•	r malfunction	_#:	0.00	0.00
c) Process problems d) Other known cause			0.00	0.00	┪	c) QA cal	onitor malfun	ction	0.00	0.00
e) Unknown causes	5		0.00	0.00	\dashv	•	known cause	e	0.00	0.00
f) Soot blowing			0.00	0.00	+	,	wn causes	9	0.00	0.00
g) Fuel problems			0.00	0.00	-	o, o				0.00
2 TOTAL DURATION (H	IRS)		0.00	0.00	٠ ر	TOTAL D	URATION (H	IRS)	0.00	0.00
3 PERCENT OF TOTAL	•						T OF TOTAL	•		
EXCESS EMISSIONS			0.00%	0.00%		CEM DO	WNTIME		0.00%	0.00%
					500.010		000 411 714	450 111 1101100		
	FOR OPACIT	Y, RECORD	ALL TIMES IN	MINUTES.	FOR GAS	ES, RECO	ORD ALL TIN	MES IN HOURS.		
% Total Excess Emissions =		Total Duratio	on of Excess Er	missions / (T	otal Opera	ting Time	- CEM Down	time)		
% Total CEM Downtime =		CEM Downti	ime / Total Ope	rating Time						
NOTES:										
16			d 40 1	6	45			- £ l d = d = -	46	
If no exceedances: I certify that during the reporting period. I c										xceedances
SUBMITTED BY:	See certif	ication pa	ige at front	of repo	rt		_	DATE:		

REPORTING QUARTER:		First, 2019		AQD FILE#: #0203 (AI ID 447)
EMISSION UNIT(S):		38-B-1, 38-B-2		
POLLUTANT MONITORED:		SO2 lb/mmbtu		
	TOTAL DURATION	MAX.	CALIGE CORRECTIVE ACTION	
DATE/TIME	(HRS)	CONCENTRATION	CAUSE/CORRECTIVE ACTION	
a) Startup/Shutdown 1/1/2019 4/1/2019		No excess emissions.		
Total	0.00			
b) Control equipment 1/1/2019 4/1/2019		No excess emissions.		
Total	0.00	_		
c) Process problems 1/1/2019 4/1/2019 Total	0.00	No excess emissions.		
d) Other known causes 1/1/2019 4/1/2019 Total	0.00	No excess emissions.		
e) Unknown causes 1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00			
f) Soot blowing 1/1/2019 4/1/2019 Total	0.00	No excess emissions.		
g) Fuel problems				
1/1/2019 4/1/2019 Total	0.00	No excess emissions.		

REPORTING QUARTER:		First, 2019	<u></u>	AQD FILE #: #0203 (AI ID 447)
EMISSION UNIT(S):		38-B-1, 38-B-2		
POLLUTANT MONITORED:		SO2 lb/hr		
	TOTAL			
	DURATION	MAX.		
DATE/TIME	(HRS)	CONCENTRATION	CAUSE/CORRECTIVE ACTION	
a) Startup/Shutdown				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00	=		
b) Control equipment				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00	_		
c) Process problems				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00	-		
d) Other known causes				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00			
e) Unknown causes				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00			
f) Soot blowing				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00			
g) Fuel problems				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00			

REPORTING QUARTER:		First, 2019	AQD FILE#: #0203 (AI ID 447)	
EMISSION UNIT(S):		38~B-1, 38-B-2		
POLLUTANT MONITORED:		Nat Gas Flow Rate		
DATE/TIME	TOTAL DURATION (HRS)	CAUSE/CORRECTIVE ACTION		
a) Monitor malfunction				
Total	0.00	-		
b) Non-monitor malfunction				
Total	0.00	-		
c) QA calibration				
Total	0.00	- ·		
d) Other known causes				
Total	0.00	-		
e) Unknown causes				
Total	0.00	-		

REPORTING QUARTER:	First, 2019	AQDFILE#: #0203 (AI ID 447)
EMISSION UNIT(S):	38-B-1, 38-B-2	
POLLUTANT MONITORED:	PSA Gas Flow Rate	
TOTAI DURATI DATE/TIME (HRS)	NC	
	CAUSE/CORRECTIVE ACTION	
a) Monitor malfunction		
Total 0.00		
b) Non-monitor malfunction		
7.11		
Total 0.00		
c) QA calibration		
Total 0.00		
d) Other known causes		
Total 0.00	_	
e) Unknown causes		
Total 0.00		

AQD FILE #: #0203 (AI ID 447)

POLLUTANT (circle one):	SO2	NOx CO	CO2	O2	TRS	H2S	HCL	Opacity
	Other:	гос	_					
				MONITOR	₹			
REPORTING QUARTER:	First, 2019		-	MODEL:		Polytron IR		**
FACILITY:				MFR: _		Drager,	inc.	
	efining Co. LLC			EMISSION	N LIMIT A	AND AVERA	GE TIME:	
			-					ded (6 hour avg)
			-					y stack test
							gate for	
EMISSION SUBJECT ITEM:	EQU10000000028		_					
				EMISSION	N BASIS			
EMISSION UNIT(S):	Light oil loadra		-	40 CFR 6	63.422	(b)	NESHAP S	ubpart CC
	Vapor Recovery	Jnit	-					
ACCOCIATED ITEMS.	monate monate	20117160 0001						
ASSOCIATED ITEMS:	TREA18, TREA25,	EQUII68, STRU	31, 8	TRU016				
				TOTAL OF	PERATIN	IG HOURS		
				OF EMISS			2126	
								-
A. EMISSION DATA SUMMA	RY			B. CEM P	ERFORM	MANCE SUM	MARY	
				:				
1 DURATION OF EXC	ESS EMISSIONS (HRS)		1 D	URATIO	N OF CEM [OOWNTIME	DURING
a) Startup/Shutdown		0.00	_	1		OPERATION	N (HRS)	
b) Control equipment	İ	0.00	-	1 '		malfunction		0.00
c) Process problems		0.00	-	i '		nitor malfund	ction	0.00
d) Other known cause	es	0.00	-	1 '	QA calil			0.00
e) Unknown causes		0.00	-	1		nown causes		9.00
f) Soot blowing		0.00	-	e)	Unknow	n causes		0.00
g) Fuel problems	(LIDC)	0.00	-	2.7	OTAL DI	IDATION (LI	DC)	0.00
2 TOTAL DURATION (3 PERCENT OF TOTA	` '	0.00	-	ľ		JRATION (H	•	9.00
EXCESS EMISSION		0.008				OF TOTAL		0.409
EVCE22 EMISSION	15	0.00%	-		EM DOV	A IA I HAIC		0.42%
· · · · · · · · · · · · · · · · · · ·	FOR OPACITY, REC	OPD ALL TIMES II	NI MINI	LITES FOR	CASE	PECORD	ALL TIMES	IN HOURS
	TOR OF ACT 1, NEO	OND ALL TIMES I	- IVIII 4		· GAGE		ALL HIVILO	1110010.
% Total Excess Emissions =	Tota	Duration of Excess	s Emis	sions / (Tota	al Operat	ing Time - C	EM Downtim	ıe)
% Total CEM Downtime =	CEM	Downtime / Total	Operat	ing Time				
NOTES:								
110120						·		
						-		
- -								
		<u> </u>						
If no exceedances: I certify that	at the required analyses v	vere made, that I ar	m fami	liar with the	results,	and that to th	e best of my	knowledge there were no
exceedances during the report is valid.	ing period. I certify that I	am familiar with th	e infor	mation in th	is report	and that to th	ne best of my	knowledge the information
	Coo cortification	n naga ++ 5	nh - 1				DATE	
SUBMITTED BY:	See certification	on page at Iro	nt or	report		_	DATE:	

REPORTING QUARTER:		First, 2019		AQD FILE # #0203 (AI ID 447)	
EMISSIO	N UNIT(S):		Light oil loadra	ck VRU	-
POLLUTA	ANT MONITORED:		TOC		
	DATE/TIME	TOTAL DURATION (HRS)	MAX. CONCENTRATION	CAUSE/CORRECTIVE AC	CTION
a) ·	Startup/Shutdown 1/1/2019 4/1/2019 _ Total	0.00	_ No excess emissions.		
b) ¹	Control equipment 1/1/2019 4/1/2019 _ Total	0.00	_No excess emissions.		
c) !	Process problems 1/1/2019 4/1/2019 _ Total	0.00	_No excess emissions.		
d) +	Other known causes 1/1/2019 4/1/2019 Total	0.00	_No excess emissions.		
e)	Unknown causes 1/1/2019 4/1/2019 Total	0.00	_No excess emissions.		
f) :	Soot blowing 1/1/2019 4/1/2019 _ Total	0.00	_ No excess emissions.		
g) l	Fuel problems 1/1/2019 4/1/2019		No excess emissions		

0.00

Total

REPORTING QUARTER:		First, 2019	AQD FILE #: #0203 (AI ID 447)
EMISSION UNIT(S):		Light oil loadrack VRU	
POLLUTANT MONITORED:		TOC	
DATE/TIME	TOTAL	CAUSE/CORRECTIVE ACTION	
a) Monitor malfunction			
Total	0.00	_	
b) Non-monitor malfunction			
Total -	0.00		
	0.00		
c) QA calibration			
		<u> </u>	
Total	0.00		
d) Other known causes 2/24/2019 6:00			
2/24/2019 13:00 3/7/2019 14:00	7.00	Span gas regulator broken; replace empty	bottle with new valve
3/7/2019 16:00 _	2.00 9.00	Replaced diaphragm and checked for plug	gging
e) Unknown causes			
Total	0.00	<u>.</u>	

AQD FILE #: #0203 (AI ID 447)

POLLUTANT (circle one):	SO2	NOx	CO	CO2	02	TRS	H2S	HCL	Opacity	
	Other:	Temperature	>	_						
					MONIT					
REPORTING QUARTER:	First, 2019		-	-	MODEL	_:	Thermoco	uple		
FACILITY:					MFR:	NA				
St. Paul Park R	efining Co.	LLC		_		-				
				-						
EMICOIONI CUID IECT ITEM	70M00000000	200			EMISSI		ND AVERAGE			
EMISSION SUBJECT ITEM:	Unit Start			-		> 215 F	- 3 hour r	Olling av	rerage	
	oni o o o o	<u> </u>		•	EMISSI	ION BASIS:	Title V	Permit		
EMISSION UNIT(S):	Light oil	Loadrack							···	
	Permanent \	/apor Combu	stor Unit	. (PVC	U)	_				
ACCOCIATED ITEMS:	EDENOC FOI	TOO FOUTA	amputa a							
ASSOCIATED ITEMS:	TREAZE, EQU	J128, EQUI4	I, STRU32	4		_				
					TOTAL	OPERATING	HOURS			
					OF EM	ISSION UNIT	:	34	_	
A. EMISSION DATA SUMMA					D OFM	L DEDECORA	NCE SUMMA	NDV		
A. EIVISSION DATA SUIVIIVIA					B. CEIVI	I PERFURIVIA	ANCE SOIMING	AIK I		
1 DURATION OF EXC	ESS EMISSION	IS (HRS)				1 DURATION	OF CEM DO	WNTIME D	DURING	
a) Startup/Shutdown			0.00		}	SOURCE (OPERATION ((HRS)		
b) Control equipment			0.00	•	1	a) Monitor			0.00	
c) Process problems			0.00			•	nitor malfuncti	on	0.00	
d) Other known caus	es		0.00			c) QA calib			0.00	
e) Unknown causes			0.00	-		•	own causes		0.00	
f) Soot blowing			0.00		1	e) Unknowi	n causes		0.00	
g) Fuel problems	(LIDC)		0.00	•	1	0 TOTAL DU	DATION (UD)	0)		
2 TOTAL DURATION	, ,		0.00				RATION (HR	5)	0.00	
3 PERCENT OF TOTAL EXCESS EMISSION			0 00%		1 '	3 PERCENT CEM DOW			0.00%	
EXCESS EMISSION	iS		0.00%	-		CEIVI DOVV	IN I IIVIE		0.00%	
	FOR OPACITY	, RECORD AL	L TIMES IN	I MINU	res. Fo	R GASES, R	ECORD ALL	TIMES IN F	IOURS.	
% Total Excess Emissions =		Total Duration	of Excess E	mission	s / (Total	Operating Ti	me - CEM Do	wntime)		
% Total CEM Downtime =		CEM Downtime	e / Total Op	erating [*]	Time					
NOTES:			- · · · · · · · · · · · · · · · · · · ·							
NOTES										
If no evenedonous: I cortify the	at the required or	alvece were m	ada that La	m famil	iar with ti	he requite on	d that to the h	ant of my ke	auladaa thara war	
If no exceedances: I certify the exceedances during the report is valid.										
SUBMITTED BY:	See certifi	.cation page	e at fron	nt of	report.			DATE:		
		1: -3						· · · - ·		

REPORTING QUARTER:		First, 2019		AQD FILE #: #0203 (AI ID 447)
EMISSION UNIT(S):		Light oil loadrac	C Process Vapor Burner (F -
POLLUTANT MONITORED:		Temperature		
	TOTAL DURATION			
DATE/TIME	(HRS)	MIN.TEMPERATURE	CAUSE/CORRECTIVE ACTION	ON
a) Startun/Shutdown				
a) Startup/Shutdown 1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00	_ 140 excess emissions.		
b) Control equipment				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00			
c) Process problems				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00	_		
d) Other known causes				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00	_		
e) Unknown causes				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00			
f) Soot blowing				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00			
g) Fuel problems				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00			

REPORTING QUARTER:		First, 2019	AQD FILE #: #0203 (AI ID 447)		
EMISSION UNIT(S):		Light oil loadrack - PVB			
POLLUTANT MONITORED:		Temperature			
DATE/TIME	TOTAL DURATION (HRS)	CAUSE/CORRECTIVE ACTION			
a) Monitor malfunction					
Total	0:00	_			
b) Non-monitor malfunction					
Total	0.00	_			
c) QA calibration					
Total	0.00	_			
d) Other known causes					
Total	0.00	_			
e) Unknown causes			; ?		
Total	0.00	-			

POLLUTANT (circle one):	(so ₂)	(NOx)) CO CO2 O2 TRS	H2S	HCL Opacity Other			
Other:	This repo	ort addr	esses Flare SARA reportabl	e emissions	s, pilot monitoring, pilot fl	ame outag	es, and SO2 monitoring	J.
REPORTING QUARTER:	First, 20	19	MONITOR					
			MODEL SOLA II		<u> </u>			
FACILITY:			MFR: Thermo	Scientific				
St. Paul Park Refin	ing Co. Ll	LC	EMISSION LIMIT A	ND AVEDAGE	TIME:			
EMISSION SUBJECT ITEM:	TREA13		EIWIGGION EIWIT A		- I IIVIE.			
EMISSION UNIT(S):			EMISSION BASIS:					
TREA13 Refinery fla	re stack		40 CFR 6	63 NESHAP S	Subpart CC, Subpart Ja			
ASSOCIATED ITEMS:	FUG173	_	-	OTAL OPERA	TING HOURS			
				OF EMISSION			2160	
				JI LIVIIGGION	ONT.			
A. EMISSION DATA SUMMA	RY		B. CEM PERFORMANCE SUMMAR	RY (Scanner)	C. CEM PERFORMANCE SUMMARY (SO2)	D. CEM PERFORMANCE SU	JMMARY (Pilots)
1 DURATION OF SARA REF	ORTABLE		1 DURATION OF CEM DOWN	TIME	1 DURATION OF CEM DOWNT	IME	DURATION OF PILOT DOW	NTIME
EMISSIONS (HRS)	SO2	NOx	DURING SOURCE OPERAT	FION (HRS)	DURING SOURCE OPERATION	ON (HRS)	DURING SOURCE OPERAT	ION (HRS)
a) Startup/Shutdown	0.00	0.00	a) Monitor malfunction	0.00	a) Monitor malfunction	0.00	a) Pilot malfunction	0.00
b) Control equipment	0.00	0.00	b) Non-monitor malfunctior_	0.00	b) Non-monitor malfunction	0.00	b) Other known causes	0.00
c) Process problems	23.00	0.00	c) QA calibration	0.00	c) QA calibration	1.00	c) Unknown causes	0.00
d) Other known causes	0.00	0.00	d) Other known causes _	0.00	d) Other known causes	29.00	4	
e) Unknown causes	0.00	0.00	e) Unknown causes	0.00	e) Unknown causes	0.00	TOTAL DURATION (HRS)	0.00
f) Soot blowing	0.00	0.00	2 TOTAL DUDATION (100)				PERCENT OF TOTAL	
g) Fuel problems	0.00	0.00	2 TOTAL DURATION (HRS)	0.00	2 TOTAL DURATION (HRS)	30.00	PILOT DOWNTIME _	0.00%
2 TOTAL DURATION (HRS)	23.00	0.00	3 PERCENT OF TOTAL		3 PERCENT OF TOTAL			
3 PERCENT OF TOTAL			CEM DOWNTIME _	0.00%	CEM DOWNTIME	1.39%	+	
EXCESS EMISSIONS	1.06%	0.00%					<u> </u>	
	FOR OPACI	ITY, RECO	ORD ALL TIMES IN MINUTES. FOR	GASES, REC	ORD ALL TIMES IN HOURS.			
% Total Excess Emissions =		Total Dur	ration of SARA Reportable Emissions	/ (Total Opera	ating Time - CEM Downtime)			
% Total CEM Downtime =		CEM Dov	wntime / Total Operating Time					
NOTES:								
•								
If no exceedances: I certify the	at the require	ed analyse	es were made, that I am familiar with	the results, an	d that to the best of my knowledge there	were no exc	eedances during the reporting	period. I certify that I
•	,				t to the best of my knowledge the inform			-
SUBMITTED BY:	See certi	ficatio	n page at front of report				DATE:	

SARA Reportable Emissions Report - SO2 (i.e., > 500 lbs)

REPORTING QUARTER:	First, 201	.9	AQD FILE #: #0203 (AT ID 447)	
EMISSION UNIT(S):	TREA13 Ref	inery flare stack		
POLLUTANT MONITORED:	502			
DATE/TIME	TOTAL DURATION APPROX (HRS) EMITTEL			
a) Startup/Shutdown				
1/1/2019 4/1/2019				
Total	0.00			
b) Control equipment 1/1/2019				
4/1/2019 Total				
	0.00			
c) Process problems 2/3/2019 0800				
2/4/2019 0600 Total	<u>23.00</u> 820.2 23.00	Please see Incident B in the summary.		
d) Other known causes				
1/1/2019 4/1/2019				
Total	0.00			
e) Unknown causes				
1/1/2019 4/1/2019				
Total	0.00			
f) Soot blowing 1/1/2019				
4/1/2019	0.00			
Total	0.00			
g) Fuel problems 1/1/2019				
4/1/2019 Total	0.00			

SARA Reportable Emissions Report - NO2 (i.e., > 1000 lbs)

REPORTING QUARTER	₹:	First, 2019	_	AQD FILE #: #0203 (AI ID 447)
EMISSION UNIT(S):		TREA13 Refinery f	lare stack	-
POLLUTANT MONITOR	ED:	NA (NOx is calcul	ated)	
DATE/TIME	TOTAL DURATION (HRS)	APPROX, NO2 EMITTED (LBS)	CAUSE/CORRECTIVE ACTION	
4/1/	/2019 /2019			
Total	0.00			
	/2019 /2019 			
c) Process problems	/2019			
Total	0.00			
	/2019 /2019			
Total	0.00	•		
	/2019 /2019			
Total	0.00	•		
	/2019 /2019			
Total	0.00	•		
	/2019 /2019			
Total	0.00	•		

REPORTING	QUARTER:		First, 2019			AQD FILE # #0203 (AI ID 447)
EMISSION (JNIT(S):		TREA13 Refinery fla	re stack	*****	
POLLUTAN ⁻	MONITORED:		S02			
		TOTAL				
DATE/TIN	ΛE	DURATION (HRS)	CAUSE/CORRECTIVE AC	CTION		
c) QA calibra						
	3/19/2019 8:00					
	3/19/2019 9:00		_			
Total		1.00				
d) Other kno	wn causes					
	1/2/2019 8:00					
	1/2/2019 10:00	2.00	flush out sample and retur	n lines		
	1/10/2019 9:00					
	1/10/2019 11:00	2.00	work on sampling conditio	ning system		
	1/10/2019 14:00			,		
	1/10/2019 18:00	4.00	flush sample & sample ret	urn lines		
	1/15/2019 10:00					
	1/15/2019 11:00	1.00	tube cleaned/flushed			
	1/27/2019 9:00					
	1/27/2019 11:00	2.00	tube cleaned/flushed			
	1/29/2019 7:00					
	1/29/2019 8:00	1.00	replaced sample filter, cle	aned tubing		
	1/31/2019 10:00		Topicada dalinpid intol, did	anou tubing		
	1/31/2019 11:00	1.00	PM to replace rotor			
	2/4/2019 13:00	1.00	1 W to replace rotor			
	2/4/2019 14:00	1.00	cleaned sample tube			
	2/8/2019 4:00	1.00	oleaned sample tabe			
	2/8/2019 9:00	5.00	cleaned sample tube			
	2/12/2019 13:00	3.00	ciedned sample tupe			
	2/12/2019 14:00	1.00	cleaned sample tube			
	2/17/2019 13:00	1.00	cleaned sample tube			
	2/17/2019 17:00	4.00	filter, tubing, valve replace	d		
		4.00	inter, tubing, valve replace	a		
	3/14/2019 10:00	2.00	Preventative maintenance			
	3/14/2019 12:00	2.00	Preventative maintenance			
	3/16/2019 8:00	4.00	Observed serveds because			
	3/16/2019 9:00	1.00	Cleaned sample bundle			
	3/21/2019 7:00	4.00	Onnels line alone d			
	3/21/2019 8:00	1.00	Sample line cleaned			
	3/28/2019 13:00	4.00	On the transfer			
	3/28/2019 14:00		Sample line cleaned			
Total		29.00				
e) Unknown	causes					

0.00

Total

FLARE SCANNER DOWNTIME REPORT

REPORTING QUARTER:		First, 2019	AQD FILE #:	#0203 (AI ID 447)
EMISSION UNIT(S):		TREA13 Refinery flare stack		
POLLUTANT MONITORED:		Flame Presence (Non-Pollutant)		
DATE/TIME	TOTAL DURATION (HRS)	CAUSE/CORRECTIVE ACTION		
a) Monitor malfunction				
Total	0.00	-		
b) Non-monitor malfunction				
Total	0.00	-		
c) QA calibration				
Total	0.00	-		
d) Other known causes				
Total	0.00	-		
e) Unknown causes				
Total	0.00			

FLARE PILOT DOWNTIME REPORT

REPORTING QUAR	TÉR:		First, 2019	AQD FILE # #0203 (AI ID 447)
EMISSION UNIT(S):			TREA000000013	
POLLUTANT MONIT	ORED:		<u>Flame Presence (Non-Pollutant)</u>	
DATE/TIME		TOTAL DURATION (HRS)	CAUSE/CORRECTIVE ACTION	
a) Pilot malfunction				
	1/1/2019 4/1/2019			
Total		0.00	-	
b) Other known caus				
	1/1/2019 4/1/2019			
Total	17 17 20 10 _	0.00	-	
c) Unknown causes				
	1/1/2019 4/1/2019			
Total	7/1/2019	0.00	-	

AQD FILE#: #0203 (AI ID 447)

POLLUTANT (circle one):	SO2	NOx	co	CO2	02	TRS	H28) HCL	Opacity	
	Other:	Temp								
	_				MONIT	OR				
REPORTING QUARTER:	First, 2019				MODE	L:	002A	GC	 	
540U.T/					MED					
FACILITY: St. Paul Park Re	fining Co. II	C			MFR:		ABB			
St. Paul Park Re	TIMING CO. III				EMISS	ION LIMIT	L AND AV	/ERAGE TIME:		
-					LIVIIOO			- 365 day r		age
EMISSION SUBJECT ITEM:	TREA5							- 3 hour rol		
EMISSION UNIT(S):	W.W.T.P. The	rmal Oxid	izer							
	(SBC Vent Ga	ıs / TO Te	mperature)	EMISS	ION BASI	S:			
						40 CFR	52.21			
ASSOCIATED ITEMS:	EQUI209, ST	U22, SV06	5			MN Rule	7007.08	300, Subp. 2		
						OPERAT		JRS		
					OF EM	ISSION U	INIT:	1721		
A. EMISSION DATA SUMMAR				4	D CEN	. DEDEOI	DALANOE	SUMMARY		
1 DURATION OF EXCE		(HRS)			B. CEN	PERFOR	RIVIANCE	SUMMART		
I DONAMON OF EXCE	.00 [[11]	(1110)	H2S	Temperature	1	DURATI	ON OF C	EM DOWNTIM	E DURING	
a) Startup/Shutdown			0.00	0.00	'			ATION (HRS)	H2S	Temperature
b) Control equipment		-	0.00	0.00	1		or maifun	, ,	0.00	0.00
c) Process problems		_	0.00	0.00	1	,		alfunction	0.00	0.00
d) Other known cause	s	-	0.00	0.00	7	c) QA ca			0.00	0.00
e) Unknown causes		-	0.00	0.00	1	,	known c	auses	6.00	0.00
f) Soot blowing		_	0.00	0.00		•	own caus		0.00	0.00
g) Fuel problems		_	0.00	0.00	1					
2 TOTAL DURATION (F	IRS)	_	0.00	0.00	T 2	TOTAL I	DURATIO	ON (HRS)	6.00	0.00
3 PERCENT OF TOTAL	•	_		<i>,</i>	7 3	PERCE	NT OF TO	DTAL		
EXCESS EMISSIONS	5		0.00%	0.00%		CEM DO	OWNTIME	E	0.35%	0.00%
					<u> </u>					
	FOR OPACITY,	RECORD AL	LL TIMES IN	MINUTES. FOR	R GASES	S, RECOR	RD ALL T	MES IN HOUR	RS.	
										
% Total Excess Emissions =	7	otal Duration	of Excess E	missions / (Total	Operation	ng Time - 0	CEM Dov	vntime)		
% Total CEM Downtime =	(EM Downtim	e / Total Ope	erating Time						
NOTES: CDDDCLG CDCLG CO	re converted	to an act:	irrated ele	idaa saratar	aratam	a den Taan	0 2014			
NOTES: SPPRC's SBC's we SBC's are no lon		to all act.	ivated Si	luge aerator	system	i in sun	1e 2014	·		
SBC's are no ion	ger m-use.									
If no exceedances: I certify that	the required and	vees were m	ade that Lan	n familiar with the	a reculte	and that	to the bo	et of my knowle	dae them was	no evocedances
during the reporting period. I of					o results,	anu mat	to the be	at of thy knowled	age mele wele	no exceedances
SUBMITTED BY:	See certific							DATE:		
SUBMITTED DT.		pag	- 40 11011	- II ICPOIC	_		_	DATE.		

REPORTING QUARTER:		First, 2019		AQD FILE#: #0203 (AI ID 447)
EMISSION UNIT(S):		W.W.T.P. Thermal Ox	kidizer	
POLLUTANT MONITORED:		H2S		
DATE/TIME	TOTAL DURATION (HRS)	MAX. CONC. (150 ppm,	CAUSE/CORRECTIVE ACTION	
DATE/IIME	(IIKS)	365 day average)	CAUSE/CORRECTIVE ACTION	
a) Startup/Shutdown 1/1/2019 4/1/2019 _ Total	0.00	No excess emissions.		
b) Control equipment 1/1/2019 4/1/2019 _ Total	0.00	No excess emissions.		
Total	0.00			
c) Process problems 1/1/2019 4/1/2019 Total	0.00	No excess emissions.		
d) Other known causes 1/1/2019 4/1/2019 _ Total	0.00	No excess emissions.		
e) Unknown causes 1/1/2019 4/1/2019		No excess emissions.		
Total	0.00	-		
f) Soot blowing 1/1/2019 4/1/2019 _ Total	0.00	No excess emissions.		
g) Fuel problems 1/1/2019 4/1/2019 Total	0.00	No excess emissions.		

REPORTING QUARTER:		First, 2019		AQDFILE#: #0203 (AI ID 447)
EMISSION UNIT(S):		W.W.T.P. Thermal O	xidizer	
POLLUTANT MONITORED:		Temperature		
DATE/TIME	TOTAL DURATION (HRS)	MIN. TEMP. (°F, 3-hr average)	CAUSE/CORRECTIVE ACTION	
a) Startup/Shutdown				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00	_		
b) Control equipment				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00			
-) P				
c) Process problems				
1/1/2019		Na amaza andadan		
4/1/2019 Total	0.00	No excess emissions.		4
iotai	0.00			
d) Other known causes				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00	_		
e) Unknown causes				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00	- NO CACCOS CITIOSIONS.		
f) Soot blowing				
1/1/2019				
4/1/2019	0.00	_No excess emissions.		
Total	0.00			
g) Fuel problems				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00			

REPORTING QUARTER:		First, 2019	AQD FILE#: #0203 (AI ID 447)
EMISSION UNIT(S):		W.W.T.P. Thermal Oxidizer	
POLLUTANT MONITORED:		H2S	
DATE/TIME	TOTAL DURATION (HRS)	CAUSE/CORRECTIVE ACTION	
a) Monitor malfunction			
÷			·
Total	0.00	-	
b) Non-monitor malfunction			
Total	0.00	-	
c) QA calibration			
Total	0.00	<u>.</u>	
d) Other known causes 1/2/2019 11:00			
1/2/2019 12:00 3/7/2019 14:00	1.00	Preventative maintenance	
3/7/2019 15:00 3/22/2019 16:00	1.00	Loss of signal due to controls work	
3/22/2019 20:00 _ Total	6.00	Communications error	
e) Unknown causes			
Total -	0.00	-	

REPORTING QUARTER:		First, 2019	AQD FILE#: #0203 (AI ID 447)
EMISSION UNIT(S):		W.W.T.P. Thermal Oxidizer	
POLLUTANT MONITORED:		Temperature	
DATE/TIME	TOTAL	CAUSE/CORRECTIVE ACTION	
a) Monitor malfunction			
Total	0.00	_	·
b) Non-monitor malfunction			
Total	0.00	_	
c) QA calibration			
Total	0.00	<u>-</u>	
d) Other known causes			
Total	0.00	_	
e) Unknown causes			
Total	0.00		

AQD FILE #: #0203 (AI ID 447)

POLLUTANT (circle one):	SO2	NOx	CO	CO2	02	TRS	H2S	HCL	Opacity	
	Other:	Temp								
	_			-	MONITO)R				
REPORTING QUARTER:	First, 2019			-	MODEL:		Thermoco	uple		
FACILITY:					MFR:					
St. Paul Park Ref:	ining Co. LLC			-						
				-	EMISSIC	TIMILING	AND AVERA	AGE TIME:		
EMISSION SUBJECT ITEM:	COMG13			_					ling averag	ſe
EMISSION UNIT(S):	W.W.T.P. The			-		ON BASIS				
	(N ₂ Vent Gas	s / TO Temp	erature)	-			61.349(a)			
4000014TED :TELLO					-	MN Rule	7011.993	0, Sub.E		
ASSOCIATED ITEMS:	TREA5, EQUI:	209, STRU2:	2, SV065	-						
					TOTAL (SDEDATI	NG HOURS			
						SION UN		1721		
					OI LIVIIC	SIOIV OIV		1/21	•	
A. EMISSION DATA SUMMAI	RY				B. CEM	PERFOR	MANCE SU	MMARY		
1 DURATION OF EXCES		RS)								
	•	,	Temperature		1	DURATIO	ON OF CEM	DOWNTIME	E DURING	
a) Startup/Shutdown			0.00		1	SOURCE	OPERATIO	ON (HRS)		Temperature
b) Control equipment			0.00			a) Monito	r malfunctio	n		0.00
c) Process problems			0.00	_	1	b) Non-m	onitor malfu	nction	_	0.00
d) Other known causes			0.00	-	İ	c) QA cali	ibration		_	0.00
e) Unknown causes			0.00			d) Other k	known cause	es	_	0.00
f) Soot blowing			0.00			e) Unknov	wn causes			0.00
g) Fuel problems		_	0.00							
2 TOTAL DURATION (HF	RS)		0.00		2	TOTAL D	URATION (HRS)	_	0.00
3 PERCENT OF TOTAL					3	PERCEN	T OF TOTA	L		
EXCESS EMISSIONS		_	0.00%	-		CEM DO	WNTIME		-	0.00%
	FOR OPACITY,	RECORD AL	L TIMES IN MIN	UTES.	FOR GAS	SES, REC	ORD ALL 1	TIMES IN HO	OURS.	- · · · · · · · · · · · · · · · · · · ·
% Total Excess Emissions =	7	Cotal Duration	of Evenes Emissi	iono I C	Total Once	ratina Tim	o CEM Da	usentim o)		•
			of Excess Emissi	,	,	aung min	IE - CEIVI DO	withine)		
% Total CEM Downtime =	C	JEM Downtim	e / Total Operatin	ng lime)					
NOTES:				**						
										· · ·
If no exceedances: I certify the						ults, and t	hat to the be	st of my kno	wledge there v	were no
exceedances during the report	•	•								
SUBMITTED BY:	See certific	cation page	e at front of	repo	rt			DATE:		

REPORTING QUARTER:		First, 2019	AQD FILE #: #0203 (AI ID 447)
EMISSION UNIT(S):		W.W.T.P. Thermal Oxidizer	
POLLUTANT MONITORED:		Temperature	
	TOTAL		
DATE/TIME	DURATION (HRS)	MIN. TEMP. (°F, 3-hr average) CA	HISE/CORRECTIVE ACTION
DATEITIME	(HKS)	WIIN. TEMP. (F, 5-III average) CA	OSE/CORRECTIVE ACTION
a) Startup/Shutdown			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00		
b) Control equipment			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00	-	
c) Process problems			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00	-	
d) Other known causes			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00	-	
e) Unknown causes			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00	•	
f) Soot blowing			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00	•	
g) Fuel problems			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00	-	

REPORTING QUARTER:		First, 2019	AQD FILE #: #0203 (AI ID 447)
EMISSION UNIT(S):		W.W.T.P. Thermal Oxidizer	
POLLUTANT MONITORED:		Temperature	
DATE/TIME	TOTAL DURATION (HRS)	CAUSE/CORRECTIVE ACTION	
	(111(0)	CAUGE/CONNECTIVE ACTION	
a) Monitor malfunction			
Total	0.00	-	
b) Non-monitor malfunction			
Total	0.00	-	
c) QA calibration			
Total	0.00	-	
d) Other known causes			
Total	0.00	-	
e) Unknown causes			
Total	0.00	- ,	

AQD FILE # #0203 (AI ID 447)

POLLUTANT (circle one): SO2 NOx CO CO2	O2 TRS H2S HCL	Opacity		
Other: SO2 also a surrogate for	MACT Subpart UUU HAP Emiss	ions		
	MONITOR			
REPORTING QUARTER: First, 2019	MODEL:	Advance Optima	, Limas 11, NDUV	
FACILITY:	MFR:	ABB		
St. Paul Park Refining Co. LLC				
Character and the second secon	EMISSION	LIMIT AND AVERAGE		
EMISSION SUBJECT ITEM: EQUI33		250 ppmd, O2 f	ree - 12 hour rolling average	
EMISSION UNIT(S):	EMISSION	BASIS:		
#3 SRU/SCOT unit		40 CFR 60 NSPS	Subpart J	
Unit Startup - 11/16/2004, CEM Startup 11/1	6/04	40 CFR 63.1568	Table 29 Opt la MACT Subpart U	יטט
ASSOCIATED ITEMS: TREA4, COMG7, EQUI163, EQUI296, EQU	JI210, EQUI211, STRU6			
PROCESS UNIT DESCRIPTION EU00083 is a 4-Stage Claus Sulfur Re	covery Unit with a tail Gas	Treating Unit.		
The train includes the SRU incinera			s 50 LTPD.	
	TOTAL OPERATING HOUR			
	OF EMISSION UNIT:	2160		
A. EMISSION DATA SUMMARY	B. CEM PERFORMANCE SUMMAR	Υ	C. SRU BYPASS INFORMATION	
1 DURATION OF EXCESS EMISSIONS (HRS)	1 DURATION OF CEM DOWN	ITIME DURING	1 DURATION OF BYPASS	
a) Startup/Shutdown0.00	SOURCE OPERATION (HR	S)	a) Process Problems	0.00
b) Control equipment0.00_	a) Monitor malfunction	0.00_	b) Other known causes	0.00
c) Process problems 0.00	b) Non-monitor malfunction	0.00	c) Unknown causes	0.00
d) Other known causes 0.00	c) QA calibration	0.00	_	
e) Unknown causes 0.00	d) Other known causes	0.00	2 TOTAL DURATION (HRS)	0.00
f) Soot blowing 0.00	e) Unknown causes	0.00	3 PERCENT OF TOTAL	
g) Fuel problems 0.00	,		OPERATION HOURS	0.00%
2 TOTAL DURATION (HRS) 0.00	2 TOTAL DURATION (HRS)	0.00	_	
3 PERCENT OF TOTAL	3 PERCENT OF TOTAL			
EXCESS EMISSIONS 0.00%	CEM DOWNTIME	0.00%		
FOR OPACITY, RECORD ALL TIMES IN MINUT	ES. FOR GASES, RECORD ALL TIM	ES IN HOURS.		
		-		
% Total Excess Emissions = Total Duration of Excess Emissio	ns / (Total Operating Time - CEM Dow	ntime)		
% Total CEM Downtime = CEM Downtime / Total Operating	Time			
NOTES: Actual monitored values are noted in this section.				
During excess emission events, a value equal to 1.5 times the high calif	bration gas concentration is used to re	place any analyzer reac	fings over that value since measured data po	pints are not
verifiable or accurate when at least 50% greater than the high calibratio	n gas concentration.			
				T
Market and the second	90			
If no exceedances: I certify that the required analyses were made, that I am fam there were no exceedances during the reporting period. I certify that I am familia				
knowledge the information is valid.	and the information in this report and	and to the pest of fifty		
SUBMITTED BY: See certification page at front of	report	DATE:	_	

REPORTING QUARTER:		First, 2019	AQDFILE# #0203 (AI ID 447)	
EMISSION UNIT(S):		#3 SRU/SCOT unit	t .	
POLLUTANT MONITORED:		SO2 (ppm)		
DATE/TIME	TOTAL DURATION (HRS)	MAX. CONC. (ppm, 12-hr_average)	CAUSE/CORRECTIVE ACTION	
a) Startup/Shutdown 1/1/2019 4/1/2019		Actual Recalc No excess emissions.		
Total	0.00			
b) Control equipment 1/1/2019 4/1/2019 Total	0.00	_No excess emissions.		
c) Process problems 1/1/2019 4/1/2019 Total	0.00	_No excess emissions.		
d) Other known causes 1/1/2019 4/1/2019 Total	0.00	_No excess emissions.		
e) Unknown causes 1/1/2019 4/1/2019 _ Total	0.00	No excess emissions.		
f) Soot blowing 1/1/2019 4/1/2019 _ Total	0.00	_No excess emissions.		
g) Fuel problems 1/1/2019 4/1/2019 Total	0.00	_No excess emissions.		

REPORTING QUARTER:		First, 2019	AQDFILE # #0203 (AI ID 447)
EMISSION UNIT(S):		#3 SRU/SCOT unit	
POLLUTANT MONITORED:		S02	
DATE/TIME	TOTAL DURATION (HRS)	CAUSE/CORRECTIVE ACTION	
a) Monitor malfunction			
Total	0.00	-	
b) Non-monitor malfunction			
Total	0.00	-	
c) QA calibration			•
Total	0.00	-	
d) Other known causes			
Total	0.00	-	
e) Unknown causes			
Total	0.00		

CONTINUOUS EMISSION MONITOR SRU Bypass Information

REPORTING QUART	ΓER:		First, 2019 AQD FILE#: #0203 (AI ID 447)	
EMISSION UNIT(S):			#3 SRU/SCOT unit	
POLLUTANT MONIT	ORED:		Bypass (Acid gas)	
DATE/TIME		TOTAL DURATION (HRS)	CAUSE/CORRECTIVE ACTION	
a) Process problems Total	1/1/2019 4/1/2019	0.00	No bypasses that resulted in excess emissions.	
b) Other known cause	es 1/1/2019 4/1/2019	0.00	_ No bypasses that resulted in excess emissions.	
b) Unknown causes Total	1/1/2019 4/1/2019	0.00	_No bypasses that resulted in excess emissions.	

AQDFILE#: #0203 (AI ID 447)

POLLUTANT (circle one):	NOx C	O CO2 O2	TRS H2S	HCL Opacity			
Other:							
		MONIT	OR				
REPORTING QUARTER: First, 201	9	MODE	L: Advance Optima, Lim	as 11, NDUV			
FACILITY:		MFR:	ABB				
St. Paul Park Refining Co.	LLC						
		EMISS	ION LIMIT AND AVERAGE T	IME:			
EMISSION SUBJECT ITEM: EQUI33			45.0 lb SO2/hr - 1	hour average			
			15.0 lb SO2/hr - 3	hour rolling average			
EMISSION UNIT(S): #3 SRU/SCO	r unit						
Unit Start	up - 11/16/2004	EMISS	ION BASIS: MN Rule 700	9.0020 - AAQS/SIP			
ASSOCIATED ITEMS: TREA4, COM	G7, EQUI163, EQ	UI296, EQUI21	0, EQUI211, STRU6				
			OPERATING HOURS				
		OF EM	ISSION UNIT:	2160			
A. EMISSION DATA SUMMARY		B CEN	PERFORMANCE SUMMAR	·			
A. EIIIIGGION DATA GOMINART	1 hr 3-l		TEN ONMANOE SOMMAN				
1 DURATION OF EXCESS EMISSIO		' "	1 DURATION OF CEM DO	WNTIME DURING			
1 DURATION OF EXCESS EMISSIONS (HRS) a) Startup/Shutdown 0.00 0.00		00	SOURCE OPERATION (HRS)				
a) Startup/Shutdown			,	•			
b) Control equipment	0.00 0.0		a) Monitor malfunction b) Non-monitor malfunction	0.00			
c) Process problems	0.00 0.0		,				
d) Other known causes	0.00 0.4		c) QA calibration	0.00			
e) Unknown causes	0.00 0.0		d) Other known causes	0.00			
f) Soot blowing	0.00 0.0		e) Unknown causes	0.00			
g) Fuel problems	0.00 0.0						
2 TOTAL DURATION (HRS)	0.00 0.0	00	2 TOTAL DURATION (HRS	0.00			
3 PERCENT OF TOTAL			3 PERCENT OF TOTAL				
EXCESS EMISSIONS	0.00% 0.0	0%	CEM DOWNTIME	0.00%			
FOR OPACIT	Y. RECORD ALL TI	MES IN MINUTES	FOR GASES, RECORD AL	L TIMES IN HOURS.			
% Total Excess Emissions =	Total Duration of E	xcess Emissions	(Total Operating Time - CEV	Downtime)			
				25Willing)			
% Total CEM Downtime =	CEM Downtime / T	otal Operating Tin	ne				
NOTE:							
#3 SRU/SCOT 1b SO2/hr CEM downtime is the same as reported for #3 SRU/SCOT SO2 ppm.							
#3 SRU/SCOT IB SOZ/HE CRM	downtime is the		•				
#3 SRU/SCOT ID SUZ/NF CBM	downtime is the						
#3 SKU/SCOT IB SOZ/BF CKM	lowntime is the						
	analyses were mad	e, that I am familia		the best of my knowledge there were no exceedances knowledge the information is valid.			

REPORTING QUARTER:		First, 2019	AQDFILE#: #0203 (AI ID 447)	
EMISSION UNIT(S):		#3 SRU/SCOT unit		
POLLUTANT MONITORED:		SO2 (lbs/hr) - 45	5_lb/hr, 1-hr average	
	TOTAL			
	DURATION	MAX. CONCEN.		
DATE/TIME	(HRS)	(lbs/hr, 1-hr average)	CAUSE/CORRECTIVE ACTION	
a) Startup/Shutdown				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00			
b) Control equipment				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00	,,, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
c) Process problems				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00	_140 6x0033 01113310113.		
d) Other known causes				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00			
e) Unknown causes				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00			
f) Soot blowing				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00	_		
g) Fuel problems				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00	-		

REPORTING QUARTER:		First, 2019		AQDFILE#: #0203 (AI ID 447)
EMISSION UNIT(S):		#3 SRU/SCOT unit		-
POLLUTANT MONITORED:		SO2 (lbs/hr) - 15	<u>lb/h</u> r, 3-hr average	
	TOTAL			
	DURATION	MAX. CONCEN.		
DATE/TIME	(HRS)	(lbs/hr, 3-hr average)	CAUSE/CORRECTIVE AC	CTION
a) Startup/Shutdown				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00			
b) Control equipment				
1/1/2019		No excess emissions.		
4/1/2019 _ Total	0.00	INO excess emissions.		
iotai	0.00			
c) Process problems				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00	-		
d) Other known causes				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00	The excess dimensions.		
e) Unknown causes				
1/1/2019		A 1		
4/1/2019 _ Total	0.00	No excess emissions.		
lotai	0.00			
f) Soot blowing				
1/1/2019				
4/1/2019 _		No excess emissions.		
Total	0.00			
g) Fuel problems				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00			

REPORTING QUARTER:		First, 2019 AQDFILE# #0203 (AI ID 447)
EMISSION UNIT(S):		#3 SRU/SCOT unit
POLLUTANT MONITORED:		S02 (1bs/hr)
DATE/TIME	TOTAL DURATION (HRS)	CAUSE/CORRECTIVE ACTION
	NOTE: so2 lb/hr	downtime same as reported for #3 SRU/SCOT SO2 ppm
a) Monitor malfunction		
Total	0.00	See #3 SCOT ppm page for details
b) Non-monitor malfunction		
Total	0.00	See #3 SCOT ppm page for details
c) QA calibration		
Total	0.00	See #3 SCOT ppm page for details
d) Other known causes		
Total	0.00	See #3 SCOT ppm page for details
e) Unknown causes		
Total	0.00	See #3 SCOT ppm page for details

AQD FILE #: #0203 (AI ID 447)

POLLUTANT (circle one):	SO2	NOx	CO	CO2	O2	TRS	H2S	HCL	Opacity	
	Other:	Temperature)							
	`			•	MONITOR					
REPORTING QUARTER:	First, 201	9		_	MODEL:		NA			_
FACILITY:					MFR:		NA			
St. Paul Park I	Refining Co.	LLC		-						
EMISSION SUBJECT ITEM:	EII OOO				EMICCION	I INDIT AN	ID AVERAG	= TIME:		
EWISSION SOBJECT TIEW.		n 10/20	/2000	•					ng average	
	Unit Start	7b - 10/20)	2008	•	_	220 209	3 110		ng average	
EMISSION UNIT(S):	NP VEPR Pha	ase 1			EMISSION	BASIS:	Title V	Permit		
` ,				-			MN R. 70			
ASSOCIATED ITEMS:	TREA10, TR	EA7, STRU25	5	_						
				-	TOTAL OP	ERATING	HOURS			
					OF EMISSI	ON UNIT	: _	0	_	
					ı					
A. EMISSION DATA SUMMA	ARY				B. CEM PE	RFORMA	NCE SUMM	ARY		
1 DUDATION OF EVO	SESS EMISSIO	NO (HDO)			4.01	IDATION	OF CEM DO		N. IDINIC	
1 DURATION OF EXC a) Startup/Shutdown		NS (HKS)	0 00				OF CEM DO PERATION (JURING	
b) Control equipmer		_	0.00	-	ľ		nalfunction	riko)	0.00	
c) Process problems			0.00		· · ·		itor malfuncti	on	0.00	
d) Other known caus		_	0.00		· '	QA calibra		OII	0.00	
e) Unknown causes		_	0.00	•	· ·		wn causes		0.00	
f) Soot blowing			0.00	•	1 ′	Unknown			0.00	
g) Fuel problems		_	0.00	•	ĺ					
2 TOTAL DURATION	(HRS)	_	0.00	•	2 TC	TAL DUF	RATION (HR	S)	0.00	
3 PERCENT OF TOTA	ÀL	_		•			OF TOTAL	,		
EXCESS EMISSION	18		0.00%	_	CE	M DOWN	ITIME		0.00%	
								·		
	FOR OPACITY	Y, RECORD A	LL TIMES	IN MI	NUTES. FO	R GASE	S, RECORD	ALL TIMES	IN HOURS.	
% Total Excess Emissions =		Total Duration	of Exces	s Emis:	sions / (Tota	al Operatii	ng Time - CE	M Downtim	ne)	
% Total CEM Downtime =		CEM Downtin	ne / Total (Onerati	ina Time					
		52 50		ороган						
NOTES:					-				·	
	 									
					-				~	
If no exceedances: I certify the	hat the required	analyses wer	e made, tl	hat I an	n familiar wi	th the res	ults, and that	to the best	t of my knowledge	there
were no exceedances during knowledge the information is	the reporting pe									
SUBMITTED BY:	See certifi	ication pag	e at fr	ont o	f report		•	DATE:		

REPORTING QUARTER:		First, 2019	AQD FILE #: #0203 (AI ID 447)
EMISSION UNIT(S):		NP VEPR Phase 1	
POLLUTANT MONITORED:		Temperature	
	TOTAL		
	DURATION	MIN. TEMP. (°F, 3-hr	
DATE/TIME	(HRS)	average)	CAUSE/CORRECTIVE ACTION
a) Startup/Shutdown			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00		
b) Control equipment			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00	-	
c) Process problems			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00	-	
d) Other known causes			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00		
a) Hakaawa aayaaa			
e) Unknown causes 1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00	_110 020000 011110010110.	
f) Soot blowing			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00	_	
g) Fuel problems			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00	•	

REPORTING QUARTER:		First, 2019	AQD FILE #: #0203 (AI ID 447)
EMISSION UNIT(S):		NP VEPR Phase 1	
POLLUTANT MONITORED:		Temperature	
DATE/TIME	TOTAL DURATION (HRS)	CAUSE/CORRECTIVE ACTION	
a) Monitor malfunction			
Total	0.00	- ·	
b) Non-monitor malfunction			
Total	0.00	-	
c) QA calibration	×		
Total	0.00	-	
d) Other known causes			
Total	0.00	-	
e) Unknown causes			
Total	0.00	-	

AQD FILE #: #0203 (AI ID 447)

POLLUTANT (circle one):	SO2 NOx		02 02	TRS	H2S	HCL	Opacity
	Other: Temperature		MONITO	₹			
REPORTING QUARTER:	First, 2019		MODEL:	•	NA		
FACILITY: St. Paul Park	Refining Co. LLC		MFR:		NA		
bo. Idai Idii	Rozzing Go. Bac						
EMISSION SUBJECT ITEM	1: <u>EU 089</u>				ND AVERAGI		ng average
EMISSION UNIT(S):	NP VEPR Phase 2				<u> </u>		-33 -
ASSOCIATED ITEMS:	TREA6, TREA8, STRU29		EMISSIO	N BASIS:	Title V MN R. 70		
AGGOCIATED ITEMS.	TREA6, TREA8, STRU29				MIN R. 70	07.0800	
				PERATING			
			OF EMIS	SION UNIT	-	0	-
A. EMISSION DATA SUMN	MARY		B. CEM F	PERFORM	ANCE SUMN	IARY	
1 DURATION OF EX	KCESS EMISSIONS (HRS)	0.00			OF CEM DO		DURING
b) Control equipme		0.00) Monitor n		,	0.00
c) Process probler	ns	0.00	b) Non-mon	itor malfuncti	ion	0.00
d) Other known ca		0.00) QA calibr			0.00
e) Unknown cause	es	0.00		•	own causes		0.00
f) Soot blowing	,	0.00	e	e) Unknown	causes		0.00
g) Fuel problems		0.00				•	
2 TOTAL DURATION	` '	0.00	1		RATION (HR	S)	0.00
3 PERCENT OF TO			ì	PERCENT (
EXCESS EMISSIC	JNS .	0.00%		CEM DOW	N I IIVIE		0.00%
	FOR OPACITY, RECORD	ALL TIMES IN	MINUTES. F	OR GASES	S, RECORD	ALL TIMES	IN HOURS.
% Total Excess Emissions =	= Total Duratio	on of Excess E	missions / (To	ital Operati	na Time - CF	M Downtim	e)
% Total CEM Downtime =		me / Total Ope	•	та ороган		Downtain	,
	CEM DOWN	me / Total Ope	raung rime				
NOTES:				•			
	· · · · · · · · · · · · · · · · · · ·						
							-
were no exceedances durin	that the required analyses we						
knowledge the information is SUBMITTED BY:	s valid. See certification pa	ge at front	of report			DATE:	
OUDIVITITED DT.	oo-or-roweron ba	_ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~		-		レハート	

REPORTING QUARTER:		First, 2019	AQD FILE # #0203 (AI ID 447)
EMISSION UNIT(S):		NP VEPR Phase 2	
POLLUTANT MONITORED:		Temperature	
DATE/TIME	TOTAL DURATION (HRS)	MIN. TEMP. (°F, 3-hr average)	CAUSE/CORRECTIVE ACTION
a) Startup/Shutdown 1/1/2019 4/1/2019 Total	0.00	No excess emissions.	
b) Control equipment 1/1/2019 4/1/2019 Total	0.00	_No excess emissions.	
c) Process problems 1/1/2019 4/1/2019 Total	0.00	_No excess emissions.	
d) Other known causes 1/1/2019 4/1/2019 Total	0.00	_No excess emissions.	
e) Unknown causes 1/1/2019 4/1/2019 Total	0.00	_No excess emissions.	
f) Soot blowing 1/1/2019 4/1/2019 Total	0.00	No excess emissions.	
g) Fuel problems 1/1/2019 4/1/2019 Total	0.00	_No excess emissions.	

REPORTING QUARTER:		First, 2019	AQD FILE # #0203 (AI ID 447)
EMISSION UNIT(S):		NP VEPR Phase 2	
POLLUTANT MONITORED:		Temperature	
DATE/TIME	TOTAL DURATION (HRS)	CAUSE/CORRECTIVE ACTION	
a) Monitor malfunction			
Total	0.00	_	
b) Non-monitor malfunction			
Total	0.00	-	
c) QA calibration			
Total	0.00	-	
d) Other known causes			
Total	0.00	-	
e) Unknown causes			
Total	0.00	-	

AQD FILE #: #0203 (AI ID 447)

POLLUTANT (circle one):	SO2 (NOx	со	CO2	<u>O2</u>	TRS	H2S	HCL	Opacity	
	Other:				MONITO	5	Syscon/Ura	a ac Nor		
REPORTING QUARTER:	First, 2019				MODEL:		Magnos 206			
FACILITY:	Fining Co. TIC				MFR: A	BB				
St. Paul Park Re	IIIIIII CO. LLC	-								
EMISSION SUBJECT ITEM:	EQUI42						AND AVERAG		rage	
EMISSION UNIT(S):	Boiler 7									_
	Boiler 16-B-7	'			EMISSIO	N BASIS	3 :	NSPS Db		
ASSOCIATED ITEMS:	COMG27 (Boile EQUI214, STRU		EQUI0212	,	OPERAT	ING HO	URS OF EMISS	SION UNIT:	2160	
A. EMISSION DATA SUMMAR					B CEME	Porform	ance Summary			_
DURATION OF EXCE		RS)			~		ON OF CEM DO		JRING	-
1	lb/	mmbtu 0 Day)					E OPERATION			
a) Startup/Shutdown		0.00							Natrual Gas	
b) Control equipment	_	0.00			ľ	•	or malfunction	ion	0.00	
c) Process problems d) Other known cause		0.00) Non-m) QA cal	nonitor malfunct	ion	0.00	
e) Unknown causes		0.00				•	known causes		0.00	
f) Soot blowing		0.00			1	•	wn causes		0.00	
g) Fuel problems		0.00				,				
2 TOTAL DURATION (F	HRS)	0.00			2 T	OTAL D	DURATION (HR	(S)	0.00	
3 PERCENT OF TOTAL	- 				3 F	PERCEN	IT OF TOTAL			
EXCESS EMISSIONS		0.00%			C	EM DO	WNTIME		0.00%	
	FOR OPACITY, R	RECORD AL	L TIMES IN	MINU	ITES. FOF	R GASES	S, RECORD AL	L TIMES IN H	IOURS.	
% Total Excess Emissions =	Tota	al Duration o	of Excess En	nissior	ns / (Total C	Operating	g Time - CEM D	Downtime)		
% Total CEM Downtime = NOTES:	CEN	/ Downtime	/ Total Ope	rating	Time		l'- dre-			
				_						<u>—</u>
										_
If no exceedances: I certify that exceedances during the reporting valid.										
SUBMITTED BY:	See certificat:	ion page a	t front of	repo	rt		_	DATE:		

EXCESS EMISSION REPORT

REPORTING QUARTER:		First, 2019	AQD FILE # #0203 (AI ID 447)
EMISSION UNIT(S):		Boiler 16-B-7	
POLLUTANT MONITORED:		NOx (lbs/mmbtu)	
	TOTAL	N.	
DATE/TIME	DURATION (HRS)		CAUSE/CORRECTIVE ACTION
DATE/TIME	(TINO)	WAX. CONCENTRATION	SAUSE/CORRECTIVE ACTION
a) Startup/Shutdown			
1/1/2019			
4/1/2019		No excess emissions.	
Total -	0.00	_	
b) Control equipment			
1/1/2019		No. 20 Control of the Control	
4/1/2019		No excess emissions.	
Total	0.00		
c) Process problems			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00		
 d) Other known causes 			
1/1/2019			
4/1/2019 _		No excess emissions.	
Total	0.00		
a) Halaania aanaa			
e) Unknown causes 1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00	No excess emissions.	
Total	0.00		
f) Soot blowing			
1/1/2019			
4/1/2019		No excess emissions.	
Total -	0.00		
\ - 1 11			
g) Fuel problems			
1/1/2019		No syene emission-	
4/1/2019	0.00	No excess emissions.	
Total	0.00		

REPORTING QUARTER:		First, 2019	AQD FILE #: #0203 (AI ID 447)
EMISSION UNIT(S):		16-B-7	
POLLUTANT MONITORED:		NOx	
DATE/TIME	TOTAL DURATION (HRS)	CAUSE/CORRECTIVE ACTION	
a) Monitor malfunction			
Total	0.00	-	
b) Non-monitor malfunction			
Total	0.00	-	
c) QA calibration			
Total	0.00	-	
d) Other known causes			
Total	0.00	-	
e) Unknown causes			
Total	0.00	-	

AQD FILE #: #0203 (AI ID 447)

POLLUTANT (circle one):	SO2 Other:	NOx FLOW	со	CO2	O2	TRS	H2S	HCL	Opacity
REPORTING QUARTER:	First, 201				MONITOI MODEL:		Fuel Gas Fl	ow Rate/F	G H2S CEM
FACILITY: St. Paul Park Ref	ining Co. LLG	:			MFR:				
<u></u>					EMICOLO	ALLIMIT A	ND AVERAGE	= TIME:	
EMISSION SUBJECT ITEM:	EQUI42								rolling average
EMISSION UNIT(S):	Boiler 7 Boiler 16-	B-7			EMISSIO	N BASIS:	-	SIP for S	D2 NAAQS
ASSOCIATED ITEMS:	COMG7, COM	G27, EQUI163	3, STRU44						
					OPERAT	ing Houi	RS OF EMISS	ION UNIT:	2160
A. EMISSION DATA SUMMAR					IR CEM 6	Performa	nce Summary	,	
DURATION OF EXCES		(HRS)			_		N OF CEM DO		JRING
1		,	lb/m m btu			SOURCE	OPERATION (HRS)	
a) Startup/Shutdown		_	0.00						Natural Gas
b) Control equipment			0.00		a	a) Monitor	malfunction		0.00
c) Process problems			0.00		t) Non-mo	nitor malfuncti	on	0.00
d) Other known causes	;		0.00) QA calit	oration		0.00
e) Unknown causes			0.00			d) Other ki	nown causes		0.00
f) Soot blowing		_	0.00			e) Unknow	n causes		0.00
g) Fuel problems		_	0.00						
2 TOTAL DURATION (HI	RS)	_	0.00		2 7	TOTAL DL	RATION (HRS	S)	0.00
3 PERCENT OF TOTAL	,	-			3 F	PERCENT	OF TOTAL		
EXCESS EMISSIONS		-	0.00%			CEM DOV	VNTIME		0.00%
	FOR OPACIT	Y, RECORD A	LL TIMES IN M	IINUTES. FOR	GASES, R	ECORD A	LL TIMES IN	HOURS.	**
% Total Excess Emissions =		Total Duration	of Excess Emi	ssions / (Total	Operating Ti	ime - CEN	1 Downtime)		
% Total CEM Downtim NOTES:	e =	CEM Downtim	ne / Total Opera	ating Time					
If no exceedances: I certify that									
during the reporting period. I ce SUBMITTED BY:		mili ar with the i ication page			at to the be	si of my Ki		ntormation is DATE:	valiu.
SUDMITTED DY:	Dee Celcit	LCacion page	. ac mone c	- TEDOTE				DATE:	

REPORTING QUARTER:		First, 2019	AQD FILE #: #0203 (AI ID 447)
EMISSION UNIT(S):		Boiler 16-B-7	_
POLLUTANT MONITORED:		SO2 lb/mmbtu	
	TOTAL DURATION		
DATE/TIME	(HRS)	MAX. CONCENTRATION CAUSE/CORRECTIVE ACTION	
a) Startup/Shutdown 1/1/2019 4/1/2019		No aveces emissions	
4/1/2019 _ Total	0.00	_No excess emissions.	
b) Control equipment 1/1/2019 4/1/2019 Total	0.00	_No excess emissions.	
c) Process problems 1/1/2019 4/1/2019 Total	0.00	_No excess emissions.	
d) Other known causes 1/1/2019 4/1/2019 Total	0.00	_No excess emissions.	
e) Unknown causes 1/1/2019 4/1/2019 Total	0.00	_No excess emissions.	
f) Soot blowing 1/1/2019 4/1/2019 Total	0.00	_No excess emissions.	
g) Fuel problems 1/1/2019 4/1/2019 Total	0.00	_No excess emissions.	

REPORTING QUARTER:		First, 2019	AQD FILE #: #0203 (AI ID 447)
EMISSION UNIT(S):		16-B-7	
POLLUTANT MONITORED:		Fuel Gas Flow Rate	
DATE/TIME	TOTAL DURATION (HRS)	CAUSE/CORRECTIVE ACTION	
	(11110)	OAGGETOCITIES ACTION	
a) Monitor malfunction			
		_	
Total	0.00		
b) Non-monitor malfunction			
Total	0.00	-	
c) QA calibration	•		
Total	0.00	•	
d) Other known causes			
Total	0.00		
e) Unknown causes			
Total	0.00	•	

MINNESOTA POLLUTION CONTROL AGENCY

AQD FILE#: #0203 (AI ID 447)

POLLUTANT (circle one):	SO2 NOx CO Other:	CO2	O2 TRS	H2S	HCL	Opacity	
			MONITOR	Syscon/Uras	26 - NOx		
REPORTING QUARTER:	First, 2019		MODEL:	Magnos 206			
FACILITY: St. Paul Park Re	efining Co. LLC		MFR: ABB				
EMISSION SUBJECT ITEM:	EQUI43			AND AVERAGE 1 u - 30 Day ro		erage	
EMISSION UNIT(S):	Boiler 8 Boiler 16-B-8		EMISSION BASIS	3: <u>N</u>	ISPS Db		
ASSOCIATED ITEMS:	COMG27 (Boilers 7&8), EQUI EQUI217, STRU45	<u>215</u> ,	OPERATING HO	URS OF EMISSIC	DN UNIT:	2160	
A. EMISSION DATA SUMMAR	Y		B. CEM Perform	ance Summary			
	ESS EMISSIONS (HRS)			ON OF CEM DOV	VNTIME DUI	RING	
1	lb/mmbtu (30-Day)		SOURCE	E OPERATION (H	IRS)		
a) Startup/Shutdown	0.00					Natrual Gas	
b) Control equipment	0.00			or malfunction		0.00	
c) Process problems	0.00		1 '	nonitor malfunctio	n .	0.00	
d) Other known cause			c) QA ca			0.00	
e) Unknown causes	0.00		· ·	known causes		0.00	
f) Soot blowing	0.00		e) Unkno	own causes		0.00	
g) Fuel problems	0.00						
2 TOTAL DURATION (I			2 TOTAL DURATION (HRS) 0.00				
3 PERCENT OF TOTAL	L		3 PERCEN	NT OF TOTAL			
EXCESS EMISSIONS	0.00%		CEM DO	WNTIME		0.00%	
	FOR OPACITY, RECORD ALL TIME	S IN MINUT	ES. FOR GASES, F	RECORD ALL TIM	MES IN HOU	RS.	
% Total Excess Emissions =	Total Duration of Exce	ss Emission	s / (Total Operating	Time - CEM Dow	ntime)		
% Total CEM Downtime = NOTES:	CEM Downtime / Total	Operating T	ime				
			<u> </u>				
				······································			
	t the required analyses were made, that ng period. I certify that I am familiar wit						
SUBMITTED BY:	See certification page at	front of	report	D	ATE:		

CONTINUOUS EMISSION MONITOR EXCESS EMISSION REPORT

REPORTING QUARTER:		First, 2019	AQD FILE#: #0203 (AI ID 447)
EMISSION UNIT(S):		Boiler 16-B-8	
POLLUTANT MONITORED:		NOx (lbs/mmbtu)	<u> </u>
DATE/TIME	TOTAL DURATION (HRS)	MAX. CONCENTRATION CAUS	E/CORRECTIVE ACTION
a) Startup/Shutdown	· · · · · · ·		
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00	The excess similarians.	
b) Control equipment			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00		
c) Process problems			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00		
. Office I have a second			
d) Other known causes 1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00	NO excess emissions.	
Total	0.00		
e) Unknown causes			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00		
f) Soot blowing			
1/1/2019			
4/1/2019		No excess emissions.	
Total	0.00		
a) First marktons			
g) Fuel problems			
1/1/2019 4/1/2019		No excess emissions	
4/1///19			

Total

0.00

REPORTING QUARTER:		First, 2019	AQD FILE #: #0203 (AI ID 447)				
EMISSION UNIT(S):		16-B-8					
POLLUTANT MONITORED:		NOx					
DATE/TIME	TOTAL DURATION (HRS)	CAUSE/CORRECTIVE ACTION					
a) Monitor malfunction							
Total	0.00	-					
b) Non-monitor malfunction							
Total	0.00	-					
c) QA calibration							
Total	0.00	-					
d) Other known causes							
Total	0.00	-					
e) Unknown causes							
Total	0.00	-					

MINNESOTA POLLUTION CONTROL AGENCY

AQD FILE #: #0203 (AI ID 447)

POLLUTANT (circle one):	SO2	NOx	СО	CO2	O2	TRS	H2S	HCL	Opacity
	Other:	FLOW			MONITO	R			
REPORTING QUARTER:	First, 2019	2			MODEL:		Fuel Gas F	low Rate/F	G H2S CEM
FACILITY:					MFR:				
St. Paul Park Refin	ing Co. LLC				_				
					EMISSIO	NI LIMIT	AND AVERAG	E TIME:	
EMISSION SUBJECT ITEM:	EQUI43	···							rolling average
EMISSION UNIT(S):	Boiler 8				-		_		
	Boiler 16-E	3 - 8			EMISSIO	N BASI	S:	SIP for S	02 NAAQS
ASSOCIATED ITEMS:	COMG7, COMG	27, EQUI163	, STRU44						
					OPERAT	ING HO	URS OF EMISS	SION UNIT:	2160
A. EMISSION DATA SUMMARY					B. CEM F	Perform	ance Summar	v	
DURATION OF EXCESS	EMISSIONS (H	IRS)			_		ON OF CEM DO		URING
1	,	,	lb/m m btu			SOURCE	E OPERATION	(HRS)	
a) Startup/Shutdown		_	0.00						Natrual Gas
b) Control equipment			0.00			a) Monito	or malfunction		0.00
c) Process problems		_	0.00		t	b) Non-m	nonitor malfunct	ion	0.00
d) Other known causes		_	0.00			c) QA ca	libration		0.00
e) Unknown causes			0.00		(d) Other	known causes		0.00
f) Soot blowing		_	0.00		6	e) Unkno	own causes		0.00
g) Fuel problems			0.00						
2 TOTAL DURATION (HRS)		0.00		2 7	TOTAL D	OURATION (HR	S)	0.00
3 PERCENT OF TOTAL		_			3 F	PERCEN	NT OF TOTAL		
EXCESS EMISSIONS		_	0.00%			CEM DC	WNTIME		0.00%
1.00	FOR OPACIT	Y, RECORD AI	L TIMES IN M	IINUTES. FOR	GASES, R	ECORD	ALL TIMES IN	HOURS.	
% Total Excess Emissions =		Total Duration	of Excess Emi	ssions / (Total (Operating Ti	ime - CE	EM Downtime)		
% Total CEM Downtime = NOTES:		CEM Downtim	e / Total Opera	ating Time				. .	
			-4-						
If no exceedances: I certify that the reporting period. I certify that									re were no exceedances during
SUBMITTED BY:	See certifi	cation page	at front o	f report			-	DATE:	

CONTINUOUS EMISSION MONITOR EXCESS EMISSION REPORT

REPORTING QUARTER:		First, 2019		AQD FILE # #0203 (AI ID 447)
EMISSION UNIT(S):		Boiler 16-B-8		
POLLUTANT MONITORED:		SO2 1b/mmbtu		
	TOTAL DURATION			
DATE/TIME	(HRS)	MAX. CONCENTRATION	CAUSE/CORRECTIVE ACTION	
a) Startup/Shutdown				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00	_		
b) Control equipment				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00			
c) Process problems				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00	_ red excesse extraorieries		
d) Other known causes				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00			
e) Unknown causes				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00			
f) Soot blowing				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00			
g) Fuel problems				
1/1/2019				
4/1/2019		No excess emissions.		
Total	0.00			

REPORTING QUARTER:		First, 2019	AQD FILE #: #0203 (AI ID 447)
EMISSION UNIT(S):		16-B-8	
POLLUTANT MONITORED:		Fuel Gas Flow Rate	
DATE/TI M E	TOTAL DURATION (HRS)	CAUSE/CORRECTIVE ACTION	
a) Monitor malfunction			
Total	0.00	•	
b) Non-monitor malfunction			
Total	0.00	-	
c) QA calibration			
Total	0.00		
d) Other known causes			
Total	0.00		
e) Unknown causes			
Total	0.00		

MINNESOTA POLLUTION CONTROL AGENCY

AQDFILE#: #0203 (AI ID 447)

POLLUTANT (circle one):	SO2 Other: _	NOx	<u></u>	CO2		RS H2S HCL	Opacity		
REPORTING QUARTER:	First, 2019				MONITOR MODEL:	Syscon/Uras 26 - Co	<u> </u>		
REPORTING QUARTER.	F11SC, 2019				WODLL.	Magnos 200 - 02			
FACILITY:					MFR: ABB				
St. Paul Park Re	fining Co. LLC								
						MIT AND AVERAGE TIME:			
EMISSION SUBJECT ITEM:	COMG27					Cons Per Year - 12 month			
EMISSION UNIT(S):	COMG27				(101	Boilers 7 & 8 combined	as GP 032)		
EMISSION ONT (S).	Boilers 16-E	8-7 and 1	6-B-8		EMISSION BA	ASIS: TV Air Permit - Lin	mit to avoid	I NSR	
	DOTTETS TO I	, , dild I	<u> </u>		200.0	40 CFR 52.21, Minn			
ASSOCIATED ITEMS:	EQUI42, EQUI	43, EQUI	213,						
	EQUI214, EQU	J1216, EQ	UI217, STRU4	4, STRU45			Boiler 7	Boiler 8	
					OPERATING	HOURS OF EMISSION UNIT:	2160	2160	
A. EMISSION DATA SUMMAR	Y					ormance Summary			
DURATION OF EXCESS EMISSIONS (HRS)				1 DURATION OF CEM DOWNTIME DURING					
1			Ton/Year		sou	RCE OPERATION (HRS)	·· ··		
a) Startup/Shutdown			0.00		-> **		Boiler 7	Boiler 8	
b) Control equipment c) Process problems			0.00		1 '	onitor malfunction on-monitor malfunction	0.00	0.00	
d) Other known cause	e		0.00		1 '	A calibration	0.00	0.00	
e) Unknown causes	•		0.00		1 '	ther known causes	0.00	0.00	
f) Soot blowing			0.00			nknown causes	0.00	0.00	
g) Fuel problems			0.00						
2 TOTAL DURATION (F	HRS)		0.00		2 TOT/	AL DURATION (HRS)	0.00	0.00	
3 PERCENT OF TOTAL	-				3 PER	CENT OF TOTAL			
EXCESS EMISSIONS			0.00%		CEM	DOWNTIME	0.00%	0.00%	
	FOR OPACITY,	RECORD A	ALL TIMES IN MI	INUTES. FOR	GASES, RECOR	RD ALL TIMES IN HOURS.			
% Total Excess Emissions =	T.	otal Duratio	n of Excess Emis	ssions / (Total (perating Time -	CEM Downtime)			
% Total CEM Downtime =	С	EM Downti	me / Total Opera	ting Time					
NOTES: CEMS downtime for	r the GP 032 c	ombined	emission lim:	it is repor	ted if indiv	idually or for both			
CEMS for Boiler	7 and Boiler 8	are dow	n. These pag	ges are app	licable only	for the			
combined CO limi	t				-				
If no exceedances: I certify that the reporting period. I certify the						to the best of my knowledge there wledge the information is valid.	were no excee	dances during	
SUBMITTED BY:	See certific	ation pa	ge at front	of report		DATE:			

CONTINUOUS EMISSION MONITOR EXCESS EMISSION REPORT

REPORTING QUARTER:		First, 2019		AQD FILE #: #0203 (AI ID 447)	
EMISSION UNIT(S):		GP 032 - 16-B-7 and	16-B-8		
POLLUTANT MONITORED:		CO Ton/Year			
	TOTAL				
DATE/TIME	DURATION (HRS)	MAX. CONCENTRATION	CAUSE/CORRECTIVE ACTION		
a) Startup/Shutdown					
1/1/2019					
4/1/2019 Total	0.00	No excess emissions.			
Iotai	0.00				
b) Control equipment					
1/1/2019		No avana aminaina			
4/1/2019 Total	0.00	No excess emissions.			
c) Process problems					
1/1/2019 4/1/2019		No excess emissions.			
Total	0.00	_110 00000 011110010110.			
d) O4b - 1					
d) Other known causes 1/1/2019					
4/1/2019		No excess emissions.			
Total	0.00	-			
e) Unknown causes					
1/1/2019					
4/1/2019		No excess emissions.			
Total	0.00				
f) Soot blowing					
1/1/2019					
4/1/2019		No excess emissions.			
Total	0.00				
g) Fuel problems					
1/1/2019					
4/1/2019		No excess emissions			

Total

0.00

REPORTING QUARTER:		First, 2019	AQD FILE# #0203 (AI ID 447)
EMISSION UNIT(S):		16-B-7	
POLLUTANT MONITORED:		co	
DATE/TIME	TOTAL DURATION (HRS)	CAUSE/CORRECTIVE ACTION	
a) Monitor malfunction			
a, manta mananana			
Total	0.00	-	
b) Non-monitor malfunction			
Total	0.00	-	
c) QA calibration			
Total	0.00	· -	
d) Other known causes			
Total	0.00	-	
e) Unknown causes			
Total	0.00	<u>.</u>	

REPORTING QUARTER:		First, 2019	AQD FILE #: #0	0203 (AI ID 447)
EMISSION UNIT(S):		16-B-8		
POLLUTANT MONITORED:		со		
DATE/TIME	TOTAL DURATION (HRS)	CAUSE/CORRECTIVE ACTION		
a) Monitor malfunction				
Total	0.00	-	·	
b) Non-monitor malfunction				
Total	0.00	-		
c) QA calibration				
Total	0.00	-		
d) Other known causes				
Total	0.00	-		
e) Unknown causes				
Total	0.00	-		

MINNESOTA POLLUTION CONTROL AGENCY

AQD FILE #: #0203 (AI ID 447)

POLLUTANT (circle one):	SO2 Other:	NOx	со	CO2	<u>O2</u>	TRS	H2S HCL	Opacity	
DEDODTING OUADTED					MONITOR		Syscon/Uras 26 - NO	x	
REPORTING QUARTER:	First, 201	19		•	MODEL:		Magnos 206 - O ₂		
FACILITY: St. Paul Park Ref	ining Co. L	.LC			MFR:		ABB		
				•					
					EMISSION	I LIMIT A	ND AVERAGE TIME:		
EMISSION SUBJECT ITEM:	COMG27						38 Tons Per Year -		
							(for Boilers 7 & 8	combined as	GP 032)
EMISSION UNIT(S):	COMG27			•	ENGOION				
	Boilers 16	6-B-7 and 16	-B-8	•	EMISSION	BASIS:	TV Air Permit - Lim		NSR
ASSOCIATED ITEMS:	EOUTA2 E	NITAS POUTS:	1.2				40 CFR 52.21, Minn.	R.7007.3000	
ASSOCIATED HEMS.		QUI43, EQUI2: EQUI215, EQU		CTDIIAS				Boiler 7	Boiler 8
	EQ01214, 1	3Q01213, EQ0.	1217, 518044	, 31K045	OPERATION	AC HOUS	RS OF EMISSION UNIT:	2160	2160
					OI LIGHTI	1011001	(O O) EMICOION ON	2100	2100
							····	=-	
A. EMISSION DATA SUMMAR		e (UDe)		-	-, 		nce Summary N OF CEM DOWNTIME DU	IDING	
DURATION OF EXCE	22 EMISSION	5 (NK5)	ton/yr				OPERATION (HRS)	DRING	
a) Startup/Shutdown			0.00				01 2.0 (1.10.1 (1.11.0)	Boiler 7	Boiler 8
b) Control equipment		-	0.00	•	a)	Monitor	malfunction	0.00	0.00
c) Process problems		-	0.00	•	1		nitor malfunction	0.00	0.00
d) Other known cause	s	-	0.00	•	c)	QA calib	oration	0.00	0.00
e) Unknown causes		_	0.00	•	d)	Other kr	nown causes	0.00	0.00
f) Soot blowing		_	0.00		e)	Unknow	n causes	0.00	0.00
g) Fuel problems		_	0.00						
2 TOTAL DURATION (H	RS)	_	0.00	•	2 TO	DTAL DU	RATION (HRS)	0.00	0.00
3 PERCENT OF TOTAL					3 PF	ERCENT	OF TOTAL		
EXCESS EMISSIONS		_	0.00%		CI	EM DOV	/NTIME	0.00%	0.00%
	FOR OPACI	TY, RECORD A	LL TIMES IN M	MINUTES. FOR	GASES, RE	CORD A	LL TIMES IN HOURS.		
% Total Excess Emissions =		Total Duration	of Excess Emi	ssions / (Total C	perating Tin	ne - CEM	Downtime)		
% Total CEM Downtime =		CEM Downtin	ne / Total Opera	ating Time					
NOTES: CEMS downtime for	the GP 032	combined em	ission limit	t is reported	d if indiv	ridually	y or for both		
CEMS for Boiler 7	and Boiler	8 are down.	These page	es are applio	cable only	for the	he		
combined NOx limi	t.			****			···		
				5		4h -4 4 - 41			
If no exceedances: I certify that the reporting period. I certify the								ere were no exc	eedances during
SUBMITTED BY:		fication page	•				DATE:		

CONTINUOUS EMISSION MONITOR EXCESS EMISSION REPORT

REPORTING QUARTER:	First, 2019	AQD FILE # #0203 (AI ID 447)
EMISSION UNIT(S):	GP 032 - 16-B-7 and 16-B-8	
POLLUTANT MONITORED:	NOx (Tons/Year)	
TOTAL		
DURATION		
DATE/TIME (HRS)	MAX. CONCENTRATION CAUSE/CORRECTIVE ACTION	
a) Startup/Shutdown		
1/1/2019		
4/1/2019	No excess emissions.	
Total 0.00	The shoots shinesions.	
b) Control and to the		
b) Control equipment		
1/1/2019	No avenue emissione	
4/1/2019 Total 0.00	_No excess emissions.	
Total 0.30		
c) Process problems		
1/1/2019		
4/1/2019	No excess emissions.	
Total 0.00	_	
d) Other known causes		
1/1/2019		
4/1/2019	No excess emissions.	
Total 0.00		
e) Unknown causes		
1/1/2019	No sures enteriore	
4/1/2019 Total 0.00	_No excess emissions.	
Total 5.55		
f) Soot blowing		
1/1/2019		
4/1/2019	_No excess emissions.	
Total 0.00		
g) Fuel problems		
1/1/2019		
4/1/2019	No excess emissions.	
Total 0.00	••	

REPORTING QUARTER:		First, 2019	AQDFILE#: #0203 (AI ID 447)
EMISSION UNIT(S):		16-B-7	
POLLUTANT MONITORED:		NOx	
0.75.7115	TOTAL DURATION	ALVOE (OODDESTIVE ACTION	
DATE/TIME	(HRS)	CAUSE/CORRECTIVE ACTION same downtime reported on the	form for Poilor 7 for WOV ppm
a) Monitor malfunction	ATCIME IS THE	same downcime reported on the	TOTAL FOI BOTTER / TOT NOX PENA
*			
Total	0.00	See Boiler7 (NOx) page for details	
b) Non-monitor malfunction			
Total	0.00	See Boiler7 (NOx) page for details	
c) QA calibration			
Total	0.00	See Boiler7 (NOx) page for details	
d) Other known causes			
Total	0.00	See Boiler7 (NOx) page for details	
e) Unknown causes			
Total	0.00	See Boiler7 (NOx) page for details	

REPORTING QUARTER:		First, 2019		AQD FILE #:	#0203	(AI ID 447)	
EMISSION UNIT(S):		16-B-8					
POLLUTANT MONITORED:		NOx					
	TOTAL DURATION						
DATE/TIME		CAUSE/CORRECTIVE ACTION	· · · · · · · · · · · · · · · · ·				
Note: NOx CEM d a) Monitor malfunction	owntime is the	same downtime reported on the	ne form for Boiler 8 f	for NOx ppm			
Total	0.00	See Boiler8 (NOx) page for details					
b) Non-monitor malfunction							
Total	0.00	See Boiler8 (NOx) page for details					
c) QA calibration							
Total	0.00	See Boiler8 (NOx) page for details					
d) Other known causes							
Total	0.00	See Boiler8 (NOx) page for details					
e) Unknown causes							
Total	0.00	See Boiler8 (NOx) page for details					

MINNESOTA POLLUTION CONTROL AGENCY

AQD FILE #: #0203 (AI ID 447)

POLLUTANT (circle one):	SO2 NOX CO	CO2	O2 TRS	H2S	HCL	Opacity
			MONITOR	ABB Limas11		
REPORTING QUARTER:	First, 2019		MODEL:	Magnos 206	- O ₂	
FACILITY:			MFR: ABB			
St. Paul Park Re	fining Co. LLC					
EMISSION SUBJECT ITEM			EMISSION LIMIT		TIME:	
EMISSION SUBJECT ITEM:	EQUI44		40 ppmvd at 0) * O2		
EMISSION UNIT(S):	FCC Charge Heater (8-B-1)		· · · · · · · · · · · · · · · · · · ·			
` ,	Unit Startup - 5/7/2012		EMISSION BASIS	S: <u>1</u>	NSPS Ja	
ASSOCIATED ITEMS:	COMG7, EQUI163, MR070, MR071 STRU34					
NOTE: New MR numbers M	R070 and MR071 have been selecte	d for	the new 9 Bull	hostor		
	e not yet entered into the Title			neater.		
	e not you emedica into the litera	. • pc:				
			OPERATING HO	OURS OF EMISSION	ON UNIT:	2160
A. EMISSION DATA SUMMAR	Υ		B. CEM Perform	ance Summary		
	SS EMISSIONS (HRS)			ON OF CEM DO	WNTIME DU	RING
	ppmvd		0011001	E ODERATION (
1 a) Startum/Shutdown	(30-Day)		SOURCE	E OPERATION (F	HRS)	Fuel Can
a) Startup/Shutdown b) Control equipment	0.00		a) Monito	or malfunction		Fuel Gas 0.00
c) Process problems	0.00			nonitor malfunction	on.	0.00
d) Other known cause			c) QA ca		•••	0.00
e) Unknown causes	0.00		1 '	known causes		9.00
f) Soot blowing	0.00		1 '	own causes		0.00
g) Fuel problems	0.00					
2 TOTAL DURATION (F	HRS) 0.00		2 TOTAL I	DURATION (HRS	5)	9.00
3 PERCENT OF TOTAL			3 PERCEN	NT OF TOTAL		
EXCESS EMISSIONS	0.00%		CEM DC	WNTIME		0.42%
L	FOR OPACITY, RECORD ALL TIMES II	N MINU	TES. FOR GASES,	, RECORD ALL T	IMES IN HO	URS.
% Total Excess Emissions =	Total Duration of Excess Er	missions	/ (Total Operating	Time - CEM Dow	ntime)	
% Total CEM Downtime = NOTES:	CEM Downtime / Total Ope	rating Ti	me			
		<u> </u>				
	it the required analyses were made, that I a ing period. I certify that I am familiar with th					
SUBMITTED BY:	See certification page at from	t of r	eport	(DATE:	

CONTINUOUS EMISSION MONITOR EXCESS EMISSION REPORT

REPORTING QUARTER:		First, 2019		AQDFILE#: #0203 (AI ID 447)
EMISSION UNIT(S):		EU 094		
POLLUTANT MONITORED:		NOx (ppmvd @ 0% 02)		
	TOTAL DURATIO			
DATE/TIME	N (HRS)	MAX. CONCENTRATION	CAUSE/CORRECTIVE ACTION	<u> </u>
a) Startup/Shutdown 1/1/2019		No average emissions		
4/1/2019 _ Total	0.00	No excess emissions.		
b) Control equipment 1/1/2019 4/1/2019		No excess emissions.		
Total	0.00	_110 0,0000 01110010110.		
c) Process problems 1/1/2019 4/1/2019 _ Total	0.00	No excess emissions.		
d) Other known causes 1/1/2019 4/1/2019 Total	0.00	No excess emissions.		
e) Unknown causes 1/1/2019 4/1/2019		No excess emissions.		
Total	0.00	-		
f) Soot blowing 1/1/2019 4/1/2019 Total	0.00	No excess emissions.		
g) Fuel problems 1/1/2019 4/1/2019 _ Total	0.00	No excess emissions.		

REPORTING QUARTER:		First, 2019	AQD FILE #: #0203 (AI ID	447)
EMISSION UNIT(S):		EU 094		
POLLUTANT MONITORED:		NOx		
DATE/TIME	TOTAL DURATIO N (HRS)	CAUSE/CORRECTIVE ACTION		
	14 (17110)	O NOCE CONTROL OF THE PROPERTY		
a) Monitor malfunction				
Total -	0.00	<u>.</u>		•
b) Non-monitor malfunction				
Total -	0.00	-		
c) QA calibration				
	0.00			
Total	0.00			
d) Other known causes				
1/30/2019 16:00 1/30/2019 19:00 2/2/2019 9:00	3.00	Analyzer vent frozen		
2/2/2019 11:00 3/13/2019 11:00	2.00	Alarm on validation; tubing reconnected		
3/13/2019 13:00 3/19/2019 14:00	2.00	Lamp replaced		
3/19/2019 15:00 3/21/2019 10:00	1.00	Selectivity cell replaced		
3/21/2019 11:00 _ Total	1.00 9.00	Communications error		
e) Unknown causes				
Total .	0.00	-		

MINNESOTA POLLUTION CONTROL AGENCY

AQD FILE #: #0203 (AI ID 447)

POLLUTANT (circle one):	SO2	NOx	со	CO2	02	TRS	H2S	HCL	Opacity	
	Other:	FLOW		-	MONITO)R				
REPORTING QUARTER:	First, 201	.9					fuel gas)	; MR 075	(pilot gas)	1
				=	MFR:		ll (fuel			
FACILITY:										
St. Paul Park R	efining Co	LLC		-						
				_	EMISSIC	ON LIMIT AN	ID AVEDA	CE TIME:		
EMISSION SUBJECT ITEM:	EQUI44					_			ng average	
EMICOION CODUCT TIEM.	DQUIII				1.75	<u> </u>	04 _5 11	341 10111	iig average	
EMISSION UNIT(S):	FCC Charge	Heater (8	-B-1)	_						
	Unit Start	up - 5/7/2	012	_						
					EMISSIC	ON BASIS:		SIP for S	02 NAAQS	
ASSOCIATED ITEMS:	COMG7, EQU	1163		-					 	
	STRU34			-						
NOTE: New MR numbers	MD074 and MI	0075 harra h	oon gologt	ad for th	0 704 0-	P-1 boats	or fuel a	: a d		
NOTE: New MR numbers in and pilot flow		nese number								
and price from	mecers. 11	iese manber	s are not	yet eneci	ca inco	che ilei	v permi			
							·			
					OPERAT	ING HOUR	S OF EMIS	SION UNIT:	2160	

A. EMISSION DATA SUMMA					1	Performan				
DURATION OF EXC	ESS EMISSION	NS (HRS)		11- / 1-4	1			DOWNTIME	DURING	
1 a) Startum/Chutdourn				lb/mmbtu		SOURCE	OPERATIO	M (HRS)		Eval Can
a) Startup/Shutdown b) Control equipment				0.00	-	a) Monitor	malfunction	n	-	Fuel Gas 0.00
c) Process problems				0.00	-	-	nitor malfu		_	0.00
d) Other known caus				0.00	┪	c) QA cali		iction:	-	0.00
e) Unknown causes	.03			0.00	-	•	nown cause	26	-	0.00
f) Soot blowing				0.00	1	e) Unknov		,,,	-	0.00
g) Fuel problems				0.00	1	o, o,			-	- 0.00
2 TOTAL DURATION	(HRS)			0.00	٦ ,	TOTAL D	JRATION (HRS)		0.00
3 PERCENT OF TOTAL	•				-1	PERCENT	,	•		
EXCESS EMISSION				0.00%	`	CEM DOV		_	_	0.00%
	FOR OBACIT	Y, RECORD	ALL TIMES I	AL RAINILITE C	FOR CAS	PER BECOI		IES IN HOU	ne	
<u> </u>		T, RECORD A	ALL TIMES II	VIVIINOTES.		ies, recoi	ND ALL TIN	1E3 IN HOU		
% Total Excess Emissions =		Total Duration	of Excess E	missions / (T	otal Operat	ting Time - 0	CEM Downt	ime)		
% Total CEM Downtime = NOTES:		CEM Downtim	ne / Total Ope	erating Time				11-1		
										
If no exceedances: I certify the exceedances during the report valid.										
valia.										

EXCESS EMISSION REPORT

REPORTING QUARTER:		First, 2019	AQD FILE #: #0203 (AI	ID 447)
EMISSION UNIT(S):		EQUI44	-	
POLLUTANT MONITORED:		SO2 lb/mmbtu		
	TOTAL DURATION			
DATE/TIME	(HRS)	MAX CONCENTRATION CAUSE/CORRECTIVE ACTION		
a) Startup/Shutdown 1/1/2019 4/1/2019		No excess emissions.		
Total	0.00	INO EXCESS ETHISSIONS.		
b) Control equipment 1/1/2019 4/1/2019		No excess emissions.		
Total	0.00	•		
c) Process problems 1/1/2019 4/1/2019		No excess emissions.		
Total	0.00			
d) Other known causes 1/1/2019 4/1/2019 _ Total	0.00	No excess emissions.		
e) Unknown causes	0.00			
4/1/2019_		No excess emissions.		
Total	0.00			
f) Soot blowing 1/1/2019 4/1/2019 _ Total	0.00	No excess emissions.		
g) Fuel problems 1/1/2019 4/1/2019		No excess emissions.		
Total	0.00	•		

REPORTING QUARTER: First, 2019		First, 2019	AQD FILE #: #0203 (A	AI ID 447)
EMISSION UNIT(S):		Heater 8-B-1 (EQUI44)		
POLLUTANT MONITORED:		Fuel Gas Flow Rate		
DATE/TIME	TOTAL DURATION (HRS)	CAUSE/CORRECTIVE ACTION		
a) Monitor malfunction	_			
Total	0.00	<u>.</u>		•
b) Non-monitor malfunction				
Total	0.00	-		
c) QA calibration				
Total	0.00			
d) Other known causes				
Total	0.00			
e) Unknown causes				
Total	0.00	-		

POLLUTANT (circle one): Other:	SO2 This report	NOx addresse	CO CO2 s Flare H2S	O2 emissi	TRS	H2S	HCL Opacity		
REPORTING QUARTER: FACILITY:	First, 2019			MONITOR MODEL: MFR:	Maxum II Siemens, Se	rial No. 0	01060		
St. Paul Park Refini	ing Co. LLC								
EMISSION SUBJECT ITEM:	TREA13			EMISSION	162 ppm (3-				
EMISSION UNIT(S):				EMISSION	N BASIS:				
TREA13 Refinery flam	e stack				40 CFR 63	NESHAP S	Subpart Ja		
ASSOCIATED ITEMS:	FUGI73					TOTAL OF	PERATING HOURS	2160	
A. EMISSION DATA SUMMARY			B. CEM PERFO	RMANCE	SUMMARY				
1 DURATION OF EXCESS I EMISSIONS (HRS)	EMISSIONS H2S				EM DOWNTIME E OPERATION				
a) Startup/Shutdown	0.00		a) Monit	or malfun	ction	0.00	_		
b) Control equipment	0.00		,	monitor ma	alfunction	0.00	_		
c) Process problems	29.00			alibration		4.00			
d) Other known causes	0.00			known ca		39.00	_		
e) Unknown causes	0.00		e) Unkn	own cause	es	3.00	4		
f) Soot blowing	0.00								
g) Fuel problems	0.00		2 TOTAL		. ,	46.00	_		
2 TOTAL DURATION (HRS)	29		3 PERCEI						
3 PERCENT OF TOTAL EXCESS EMISSIONS	1.34%		CEM DO	OWNTIME		2.13%			
	FOR OPACITY,	RECORD	ALL TIMES IN	MINUTES	. FOR GASES,	RECORD AL	L TIMES IN HOURS.		
% Total Excess Emissions =	To	otal Duratio	n of SARA Rej	portable E	missions / (Tota	l Operating T	ime - CEM Downtime)		
% Total CEM Downtime = NOTES:		EM Downti	me / Total Ope	rating Tim	ie				
If no exceedances: I certify that the period of the period		am familiar	with the inform	nation in th	nis report and th		best of my knowledge there of my knowledge the information DATE:		g the reporting

CONTINUOUS EMISSION MONITOR EXCESS EMISSION REPORT

REPORTING QUARTER:	1	First, 2019	_	AQD FILE#: #0203 (AI ID 447)
EMISSION UNIT(S):		TREA13 Refinery fla	re stack	
POLLUTANT MONITORED:		H2S	-	
	TOTAL			
DATE/TIME	DURATION (HRS)		CAUSE/CORRECTIVE ACTION	
	(,,,,,,)	Appen, a close coming acts./	0,1002.00.11.00.11	
a) Startup/Shutdown 1/1/2019 0:00				
4/1/2019 0:00				
		_		
Total	0.00			
b) Control equipment				
1/1/2019 4/1/2019				
Total	0.00	-		
c) Process problems				
1/26/19 16:00	5.00	1167	Please see Incident A in the summary	
1/27/19 20:00 1/29/19 23:00	5.00	1107	Please see incident A in the summary	
1/30/19 19:00 2/3/19 0600	18.00	1065	Please see Incident A in the summary.	
2/3/19 1100	6.00	2044	Please see Incident B in the summary.	
Total	29.00	-		
d) Other known causes 1/26/2019 0:00				
4/1/2019 0:00				
Total	0.00	-		
e) Unknown causes				
1/1/2019				
4/1/2019		-		
Total	0.00			
	0.00			
f) Soot blowing 1/1/2019				
4/1/2019		_		
Total	0.00			
g) Fuel problems				
1/1/2019 4/1/2019				
Total	0.00	_		

REPORTING QUARTER:		First, 2019	AQD FILE #:	#0203 (AI ID 447)
EMISSION UNIT(S):		TREA13 Refinery flare stack	_	
POLLUTANT MONITORED:		н25		
DATE/TIME	TOTAL DURATION (HRS)	CAUSE/CORRECTIVE ACTION		
c) QA calibration	· · · · · · · · · · · · · · · · · · ·			
1/26/2019 7:00 1/26/2019 9:00 1/27/2019 7:00	2.00	QA Calibration		
1/27/2019 8:00 1/28/2019 7:00	1.00	QA Calibration		
1/28/2019 8:00	1.00.	QA Calibration		
Total	4.00			
d) Other known causes 1/9/2019 8:00				
1/10/2019 13:00 1/23/2019 13:00	29.00	GC Plugged		
1/23/2019 19:00 2/17/2019 14:00		Down in sympathy with GC BTU Maintenance-pi data-missing		
2/17/2019 17:00 2/19/2019 11:00		Sample probe plugging, probe filter and tubing replaced		
2/19/2019 12:00 Total	1.00 39.00	replace sample filter and tubing		
e) Unknown causes				
1/12/2019 16:00				
1/12/2019 17:00 1/14/2019 19:00	2.1			•
1/14/2019 20:00 2/4/2019 8:00				
2/4/2019 9:00	1.00			
Total	3.00	-		

Tag #:	31-AI-1A	Calender Quarter:	FIRST
Unit:	#2 SRU	Analyzer Span:	0 - 25%
Component:	OXYGEN (O ₂)	Serial Number:	C149549
Date:	Thursday, January 17, 2019	Technician:	BRYAN WINN
Start Time:	13:29	End Time:	14:15

Cylinder Gas Pressure Values

Cylinder Pressure (Start)		
Low Range	1030	
High Range	900	

Cylinder Pressure (End)		
Low Range	1000	
High Range	900	

Cylinder Gas Information				
Low Calibration Gas High Calibration Gas				
Cylinder Certification Number:	CC37936	CC175979		
Cylinder Certification Date:	7/5/2011	7/7/2011		
Cylinder Expiration Date:	7/5/2019	7/7/2019		
Type of Cylinder Certification:	EPA Protocol One	EPA Protocol One		
Concentration (ppm or % Ca):	5.122	10.070		

Calibration Gas Audit Results		
	Low Cal Gas	High Cal Gas
Range of Allowance (±15%) Low	4.35	8:56
Range of Allowance (±15%) High	5.89	11.58
Test Run #1	5.13	10.14
Test Run #2	5.13	10.14
Test Run #3	5.13	10.13
Average Result (Cm)	5.13	10.14
Accuracy (%)	0.14	0.66
Allowable Accuracy Error (%)	± 15%	± 15%
Test Results	PASS PASS SA	PASS

TEST WAS SUCCESSFUL!

Tag #:	31-AI-1B	Calender Quarter:	FIRST
Unit:	#2 SRU	Analyzer Span:	0 - 500 PPM
Component:	SULFUR DIOXIDE (SO ₂)	Serial Number:	6981
Date:	Thursday, January 17, 2019	Technician:	BRYAN WINN
Start Time:	13:29	End Time:	14:15

Cylinder Gas Pressure Values

Cylinder Pressure (Start)			
Low Range 1030			
High Range 900			

Cylinder Pressure (End)		
Low Range	1000	
High Range	900	

Cylinder Gas Information				
	Low Calibration Gas	High Calibration Gas		
Cylinder Certification Number:	CC37936	CC175979		
Cylinder Certification Date:	7/5/2011	7/7/2011		
Cylinder Expiration Date:	7/5/2019	7/7/2019		
Type of Cylinder Certification:	EPA Protocol One	EPA Protocol One		
Concentration (ppm or % Ca):	127.000	279.500		

Calibration Gas Audit Results		
	Low Cal Gas	High Cal Gas
Range of Allowance (±15%) Low	107.95	237.58
Range of Allowance (±15%) High	146.05	321.43
Test Run #1	115.44	281.01
Test Run #2	128.59	283.40
Test Run #3	128.33	283.11
Average Result (Cm)	124.12	282.51
Accuracy (%)	-2.27	*1:08
Allowable Accuracy Error (%)	± 15%	± 15%
Test Results	VALVA PASSIVIVA	Barrangassada aa

TEST WAS SUCCESSFUL!

Tag #:	2-Al-103	Calender Quarter:	FIRST
Unit:	#2 CRUDE	Analyzer Span:	0 - 10%
Component:	OXYGEN (O ₂)	Serial Number:	3.246580.2
Date:	Monday, January 28, 2019	Technician:	BRYAN WINN
Start Time:	13:20	End Time:	14:37

Cylinder Gas Pressure Values

Cylinder Pressure (Start)		
Low Range	1490	
High Range	1400	

Cylinder Pressure (End)	
Low Range	1480
High Range	1400

Cylinder Gas Information		
	Low Calibration Gas	High Calibration Gas
Cylinder Certification Number:	SG9169569BAL	CC174008
Cylinder Certification Date:	7/1/2013	2/17/2011
Cylinder Expiration Date:	7/1/2021	2/17/2019
Type of Cylinder Certification:	EPA Protocol One	EPA Protocol One
Concentration (ppm or % Ca):	5.002	9.998

Calibration Gas Audit Results		
	Low Cal Gas	High Cal Gas
Range of Allowance (±15%) Low	4.25	8.50
Range of Allowance (±15%) High	5.75	11:50
Test Run #1	4.84	9.82
Test Run #2	4.84	9.82
Test Run #3	4.85	9.83
Average Result (Cm)	4.84	9:82
Accuracy (%)	-3:17	-1.76
Allowable Accuracy Error (%)	± 15%	± 15%
Test Results	PASS AND	PARTICIPASS AND AND AND AND AND AND AND AND AND AND

TEST WAS SUCCESSFUL!

Tag #:	2-AI-104	Calender Quarter:	FIRST
Unit:	#2 CRUDE	Analyzer Span:	0 - 100 PPM
Component:	OXIDES OF NITROGEN (NO _X)	Serial Number:	3.246579.2
Date:	Monday, January 28, 2019	Technician:	BRYAN WINN
Start Time:	13:20	End Time:	14:37

Cylinder Gas Pressure Values

Cylinder Pressure (Start)			
Low Range	1510		
High Range 1770			

Cylinder Pressure (End)	
Low Range	1500
High Range	1750

Cylinder Gas Information		
	Low Calibration Gas	High Calibration Gas
Cylinder Certification Number:	CC268503	CC18672
Cylinder Certification Date:	8/15/2016	5/2/2014
Cylinder Expiration Date:	8/15/2019	5/2/2022
Type of Cylinder Certification:	EPA Protocol One	EPA Protocol One
Concentration (ppm or % Ca):	25.0	57.3

Calibration Gas Audit Results		
	Low Cal Gas	High Cal Gas
Range of Allowance (±15%) Low	21.26	48.72
Range of Allowance (±15%) High	28.76	65.92
Test Run #1	24.83	55.21
Test Run #2	24.76	55.22
Test Run #3	24.91	55.47
Average Result (Cm)	24.83	55.30
Accuracy (%)	-0.71	-3:53
Allowable Accuracy Error (%)	± 15%	± 15%
Test Results	PASSILLE	EASTERN PASSING AND

TEST WAS SUCCESSFUL!

Tag #:	32-AI-250	Calender Quarter:	FIRST
Unit:	HDH	Analyzer Span:	0 - 10%
Component:	OXYGEN (O ₂)	Serial Number:	3.346624.7
Date:	Monday, January 28, 2019	Technician:	BRYAN WINN
Start Time:	8:59	End Time:	10:15

Cylinder Gas Pressure Values

Cylinder Pressure (Start)	
Low Range	1600
High Range	1510

Cylinder Pressure (End)		
Low Range	1575	
High Range	1500	

Cylinder Gas Information			
Low Calibration Gas High Calibration Gas			
Cylinder Certification Number:	CC327623	CC337712	
Cylinder Certification Date:	2/4/2011	2/3/2011	
Cylinder Expiration Date:	2/4/2019	2/3/2019	
Type of Cylinder Certification:	EPA Protocol One	EPA Protocol One	
Concentration (ppm or % Ca):	5.023	10.000	

Calibration Gas Audit Results				
	Low Cal Gas	High Cal Gas		
Range of Allowance (±15%) Low	4.27	8.50		
Range of Allowance (±15%) High	5.78	11.50		
Test Run #1	5.01	10.03		
Test Run #2	5.03	10.03		
Test Run #3	5.03	10.04		
Average Result (Cm)	5.02	10.03		
Accuracy (%)	0.02	0.34		
Allowable Accuracy Error (%)	± 15%	± 15%		
Test Results	ALCON PASSALLAR	PASS:		

TEST WAS SUCCESSFUL!

Tag #:	32-AI-251	Calender Quarter:	FIRST
Unit:	HDH	Analyzer Span:	0 - 100 PPM
Component:	OXIDES OF NITROGEN (NO _X)	Serial Number:	3.346654.7
Date:	Monday, January 28, 2019	Technician:	BRYAN WINN
Start Time:	8:59	End Time:	10:15

Cylinder Gas Pressure Values

Cylinder Pressure (Start)			
Low Range 1850			
High Range	1400		

Cylinder Pressure (End)			
Low Range	1795		
High Range	1400		

Cylinder Gas Information					
Low Calibration Gas High Calibration Gas					
Cylinder Certification Number:	CC419354	CC400311			
Cylinder Certification Date:	1/3/2017	7/10/2013			
Cylinder Expiration Date:	1/3/2020	7/10/2021			
Type of Cylinder Certification:	EPA Protocol One	EPA Protocol One			
Concentration (ppm or % Ca):	24.79	57.71			

Calibration Gas Audit Results				
	Low Cal Gas	High Cal Gas		
Range of Allowance (±15%) Low	21.07	49.05		
Range of Allowance (±15%) High	28.51	66.37		
Test Run #1	25.42	57.88		
Test Run #2	25.21	57.82		
Test Run #3	25.34	57.80		
Average Result (Cm)	25.32	57.83		
Accuracy (%)	2.15	0.21		
Allowable Accuracy Error (%)	± 15%	± 15%		
Test Results	12.657	PASS COLUM		

TEST WAS SUCCESSFUL!

Saint Paul Park Refinery Opacity Audit Saint Paul Park, MN

Tag #: Unit:	8-AI-3A	Filter Certification Date: November 18, 2018			
Unit:	FCC	Note: Cert. date must be no later than 6 months of test			
Date:	Thursday, March 21, 2019	Instrument Serial No: 440-A-6000044023-B21/42			
Technician:	BRYAN WINN	Monitor Pathlength	60.125"		
Start Time:	13:55	Outlet Pathlength:	60.125"		
End Time:	15:04	Pathlength Corrected:	No		

Calibrated Neutral Density Filter Values

Actual Optical Density Filter Values			
Low Range 13.26			
Mid Range	20.07		
High Range	34.08		

Adjusted Optic	al Density Filter Values
Low Range	N/A
Mid Range	N/A
High Range	N/A

Opacity Audit Readings						
Run Number Range		Calibration Filter	Instrument Reading	Arithmetic Values (Ca - Cm)		
Kull Nullibel	Range	(%Ca)	(%Cm)	Low	Mid	High
1-1	Low	13.26	13.15	0.11		\searrow
1-2	Mid	20.07	19.83		0.24	\bigvee
1-3	High	34.08	33.83		\sim	0.25
2-1	Low	13.26	13.35	-0:09	\searrow	$>\!<$
2-2	Mid	20.07	19.83		0.24	\sim
2-3	High	34.08	33.75		\sim	0.33
3-1	Low	13.26	12.99	0.27	\searrow	$\overline{}$
3-2	Mid	20.07	19.83		0.24	\times
3-3	High	34.08	33.83			. 0.25
4-1	Low	13.26	12.84	0.42		
4-2	Mid	20.07	19.83		0.24	
4-3	High	34.08	33.83		$\overline{}$	0.25
5-1	Low	13.26	13.02	0.24		$>\!\!<$
5-2	Mid	20.07	19.83		0.24	
5-3	High	34.08	33.75		$>\!\!<$	0.33

Opacity Audit Results					
Low Mid High					
Arithmetic Mean	* 0.19	0:24	0.28		
Standard Deviation	0.19	·	0.04		
Confidence Coefficient	0.24	0.00	0.05		
Calibration Error (%)	0.43	0:24	0.34		
Allowable Calibration Error (%)	≤ 3%	≤ 3%	≤ 3%		
Test Results		NVIII.S9	F/1581		

TEST WAS SUCCESSFUL!

NOTE: Test Method and Procedures can be referenced from Saint Paul Park Refining Company (SPPRC) Title V Permit and QA/QC Program per Minnesota State Rule 7017 Subpart (1).



Opacity Certification Services, LLC

A Proud Veteran-Owned Business

8600 Harbor Drive Raleigh, North Carolina 27615 Phone 919.215.9384 Fax 919.846.6041

Web: www.apacitycert.com

Results of NIST-Traceable () pacity Filter (Audit Attenuators) Certification

Customer: St. Paul Park Refining Co., LLC

Date of Certification: November 18, 2018

Date of Expiration: November 18, 2019

Document No. 111818-03

Filters (Attenuators) are certified in accordance with 40 CFR Part 60, Subpart B, "Performance Specification 1", as well as the most current ASTM D6216 standard and Opacity Procedure 3. Laboratory spectrophotometer is calibrated daily by use of NIST SRM2031b standard reference materials.

Spectrophotometer

Spectrophotometer: Varian (HP) Cary 50 Conc		Serial Numb	er: EL06023153
Scanning Range: 380-780mm	Data Interval	: 10nm	Spectral Bandpass: 1.5nm
Maximum Accuracy: ± 0.250 Absolute	Opacity	Laboratory 1	emperature: 72° F (± 3°)/22° C (± 1°)

NIST Standard Reference Material (SRM)

SRM Type: NIST 2031b series	Serial Number: Blank; 709-10; 709-30; 709-90
SRM Date of Certification: February 22, 2017	SRM Date of Expiration: February 28, 2019

Opacity Monitor

Opacity Monitor Make/Model: Thermo En				nvironmental 440 series			
Monitor Light Source:	lescent		Straight stack correction factor:	1.000			
Angle of Incidence:	10 deg	rees		Correction factor (if given):	1.000		

Opacity Filte	er Data	Set ID: #2						
Serial Number	Opacity	Transmittance	Optical Density	Previous Opacity	Δ Opacity			
Q05A	13.26%	86.74%	0.0618	13.28%	-0.02			
F43A	20.07%	79.93%	0.0973	20.11%	-0.04			
F44A	34.08%	65.92%	0.1810	34.39%	-0.31			

Signature of Spectrophotometer Operator

Filter Certification Results for: St. Paul Park Refining Co, LLC

Filter Serial No: Q05A

Date of Scan: 11/18/2018 Opacity Value = 13.26%

Expiration Date: 117 Sales

Monitor: Thermo Environmental 440

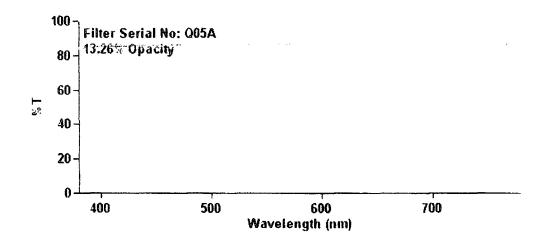
Angle of Incidence: 10 deg

Transmittance = 86.74%

Optical density = 0.0618

Table 1-1: Opacity filter Scan Data at 10 nm Intervals

Lambda	Scan 1	Scan 2	Average	% Trans	Lambda	Scan 1	Scan 2	Average	% Trans
780	86.5	86.5	86.5	0.0	570	86.7	86.8	86.8	793508.
770	86.6	86.6	86.6	0.0	560	86.7	86.7	86.7	853452.
760	86.6	86.6	86.6	86.6	550	86.8	86.7	86.8	852934.
750	86.6	86.6	86.6	86.6	540	86.7	86.7	86.7	797360.
740	86.6	86.6	86.6	173.2	530	86.7	86.7	86.7	687737.
730	86.6	86.6	86.6	259.9	520	86.7	86.6	86.6	559876.
720	86.7	86.7	86.7	520.2	510	86.6	86 .6	86.6	418478.
710	86.7	86.7	86.7	1213.9	500	86.5	86.5	86.5	294209.
700	86.7	86.7	86.7	2513.9	490	86.5	86.5	86.5	203938.
690	86.7	86.8	86.8	5379.9	480	86.4	86.4	86.4	139796.
680	86.6	86.6	86.6	11606.5	470	86.4	86.4	86.4	91396.0
670	86.7	86.7	86.7	22448.0	460	86.2	86.3	86.3	59858.3
660	86.7	86.6	86.7	43681.2	450	86.0	86.C	86.0	38101.8
650	86.7	86.7	86.7	76829.8	44C	85.8	85.9	85.8	22488.5
640	86.7	86.7	86.7	125084.	430	85.8	85.8	85.8	10472.2
630	86.7	86.7	86.7	189912.	420	85.6	85.5	85.5	3165.2
620	8€.7	86.6	86.6	273203.	410	85.6	85.5	85.5	769.9
610	86.8	86.8	86.8	362487.	400	85.3	85.3	85.3	170.5
600	86,8	86.8	86.8	461264.	390	84.9	84.9	84.9	0.0
590	86.7	86.8	86.8	574992.	380	84.2	84.1	84.2	0.0
580	86.8	86.8	86.9	693606.		0.0	0.0	0.0	0.0



Filter Certification Results for: St. Paul Park Refining Co, LLC

Filter Serial No: F43A

Date of Scan: 11/18/2018

Expiration Date: 10 10 10

Monitor: Thermo Environmental 440

Angle of Incidence: 10 deg

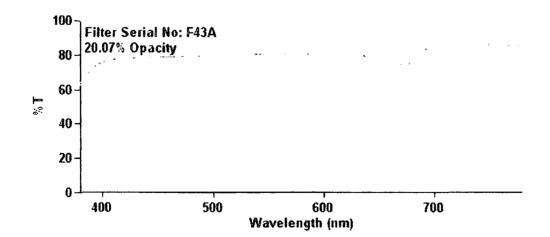
Opacity Value = 20.07%

Transmittance = 79.93%

Optical density = 0.0973

Table 1-1: Opacity filter Scan Data at 10 nm Intervals

Lambda	Scan i	Scan 2	Average	% Trans	Lambda	Scan 1	Scan 2	Average	% Trans
780	84.8	84.8	84.8	0.0	570	80.3	BC.3	80.3	734531.
770	85.2	85.1	85.2	0.0	560	80.2	80.2	80.2	789223.
760	85.5	85.4	85.5	85.5	550	80.3	80.3	E.08	789217.
750	85.7	85.8	85.8	85.8	540	80.2	80.2	80.2	737420.
740	86.0	86.0	86.0	172.0	530	80.0	79.9	79.9	634292.
730	86,2	86.2	86.2	258.6	520	80.0	80.0	80.0	516894.
720	86.4	86.4	86.4	518.1	510	79.9	79.9	79.9	386314.
710	86.2	86.2	86.2	1206.9	500	79.4	79.4	79.4	270044.
700	85.3	85.2	85.3	2473.C	490	79.2	79.1	79.1	186621.
690	81.4	81.5	81.5	5051.1	480	79.2	79.2	79.2	128097.
680	75.1	75.1	75.1	10058.6	470	79.0	79.0	79.0	83621.9
670	74.6	74.6	74.6	19317.1	460	78.7	78.8	78.7	54646.4
660	77.7	77.7	77.7	39180.4	450	78.5	78.4	78.4	34752.4
650	78.9	78.9	78.9	69890.1	440	78.1	78.1	78.1	20456.6
640	79.0	78.9	79.0	113966.	430	78.1	78.1	78.1	9526.1
630	79.3	79.3	79.3	173603.	420	77.6	77.6	77.6	2871.6
620	79.7	79.7	79.7	251383.	410	77.3	77.4	77.3	696.1
610	79.5	79.5	79.5	331999.	400	75.8	75.8	75.8	151.6
600	79,3	79.3	79.3	421581.	390	71.0	70.9	70.9	0.0
590	80.0	80.0	86.0	530425.	380	62.6	62.7	62.7	0.0
580	80.3	80.3	80.3	641530.		0.0	0.0	0.0	0.0



Filter Certification Results for: St. Paul Park Refining Co, LLC

Filter Serial No: F44A

Date of Scan: 11/18/2018 Opacity Value = 34.08%

Expiration Date:

Monitor: Thermo Environmental 440

Angle of Incidence: 10 deg

Transmittance = 65.92%

Optical density = 0.1810

Table 1-1: Opacity filter Scan Data at 10 nm Intervals

Lambda	Scan l	Scan 2	Average	<pre>₹ Trans</pre>	Lambda	Scan 1	Scan 2	Average	% Trans
780	66.8	66.8	66.8	0.0	570	66.3	66.4	66.3	606887.
770	66.8	66.8	66.8	0.0	560	66.2	66.1	66.1	650975.
760	66.9	66.8	66.9	66.9	550	66.0	66.C	66.0	648453.
750	66.9	66.9	66.9	€€.9	540	65.7	65.8	65.8	604555.
740	66.9	67.0	66.9	133.9	530	65.4	65.4	65.4	519178.
730	67.0	67.0	67.0	200.9	520	65,1	65.1	65.!	420918.
726	67.0	67.0	67.0	402.2	510	64.8	64.8	64.8	313032.
710	67.0	67.1	67.0	938.6	500	64.4	64.4	64.4	219114.
700	67.1	67.0	67.1	1944.8	490	64.1	64.1	64.1	151121.
690	67.J	67.1	67.1	4160.7	480	63.6	63.7	63.6	102978.
680	67.0	67.0	67.0	8984.4	470	63.3	63.3	63.3	66937.8
670	67.1	67.1	67.1	17376.9	460	62.8	62.8	62.8	43560.8
660	67.1	67.1	67.1	33820.3	45C	62.2	62.2	62.2	27568.5
650	67.1	67.1	67.1	59435.1	44C	61.7	61.6	61.7	16157.5
€40	67.0	67.0	67.0	96723.0	430	61.2	61.2	61.2	7470.2
630	67.0	67.0	67.0	246741.	420	60.6	60.6	60.6	2241.3
620	66.9	66.9	66.9	211003.	410	60.1	60.1	60.1	540.9
610	66.9	66.9	66.9	279361.	400	59.4	59.4	59.4	118.8
600	66.8	66.8	66.B	354939.	390	58.7	58.7	58.7	0.0
590	66.6	66.7	66.7	441710.	380	58.0	58.0	58.0	0.0
580	66.5	66.5	66.5	531644.		0.0	0.0	0.0	0.0

